Not to be cited without
permission of the authors[1]

Ne pas citer sans
autorisation des auteurs[1]

DFO Atlantic Fisheries
Research Document 94/70

MPO Pêches de l'Atlantique
Document de recherche 94/70

Groundfish Assessment Data Sheets - 1994

by

Denis Rivard (Editor)
Fisheries Research Branch
Department of Fisheries and Oceans
200 Kent Street
Ottawa, Ontario
Canada
K1A 0E6

---

[1] This series documents the scientific basis for the evaluation of fisheries resources in Atlantic Canada. As such, it addresses the issues of the day in the time frames required and the documents it contains are not intended as definitive statements on the subjects addressed but rather as progress reports on ongoing investigations.

Research documents are produced in the official language in which they are provided to the secretariat.

[1] La présente série documente les bases scientifiques des évaluations des ressources halieutiques sur la côte atlantique du Canada. Elle traite des problèmes courants selon les échéanciers dictés. Les documents qu'elle contient ne doivent pas être considérés comme des énoncés définitifs sur les sujets traités, mais plutôt comme des rapports d'étape sur les études en cours.

Les Documents de recherche sont publiés dans la langue officielle utilisée dans le manuscrit envoyé au secrétariat.

104-07506/

ABSTRACT

This document summarizes, in a standard format, some of the information used in recent assessments of groundfish stocks in the Northwest Atlantic. For each stock, data are presented on historical catches and Total Allowable Catches (TAC), as well as on temporal trends in estimates of stock abundance (recruitment, total biomass, spawning biomass), in indices of abundance from research vessel surveys, in the performance of commercial fisheries (standardized catch rates) and in other biological characteristics (e.g. fish weight). For the areas where information from fisheries surveillance operations is available, the catch information has been corrected to take into consideration some of the non- or mis-reporting. These data have been compiled in a standard format to facilitate the preparation of overviews or briefing material on groundfish stocks of the Northwest Atlantic.

RÉSUMÉ

Ce document rassemble, sous un format uniforme, une partie de l'information utilisée lors des évaluations récentes sur les stocks de poisson de fond du nord-ouest de l'Atlantique. Pour chacun des stocks, on y présente les données sur les prises et le Total des Prises Admissibles (TPA) antérieurs, de même que sur les tendances temporelles des estimés d'abondance des stocks (recrutement, biomasse totale, biomasse des géniteurs), dans les indices d'abondance obtenus des navires de recherche, dans la performance des pêches commerciales (taux de capture normalisés), et dans d'autres caractères biologiques (e.g. poids du poisson). L'information sur les prises a été corrigée pour tenir compte, du moins en partie, des non-rapports ou faux-rapports là où les programmes de surveillance sur les pêches permettent de le faire. Cette compilation des données sous un format uniforme vise à faciliter la préparation de vues d'ensemble ou de divers documents d'information sur les poissons de fond du nord-ouest de l'Atlantique.

CONTENTS

Section **Page**

Introduction 4

Cod

2GH 5
2J-3KL 6
3M 10
3NO 12
3Ps 15
3Pn-4RS 18
4T-4Vn(Nov.-April) 20
4Vn(May-October) 22
4VsW 24
4X 26
5Zj,m 29
Total 31

Haddock

3LNO 32
3Ps 34
4TVW 36
4X 38
5Zj,m 40
Total 42

Pollock

3Ps 43
4VWX+5 45
Total 47
Silver hake 4VWX 48

White hake

4T 50
4VWX 52
GADOIDS - Total 53

Redfish

2+3K 54
3LN 56
3M 58
3O 60
Laurentian Channel 62
Gulf of St. Lawrence 64
Scotian-Shelf 67
Total 68

Grenadier

SA0+1 69
SA2+3 70
Argentine 4VWX 71
Other groundfish - Total 72

Section **Page**

Plaice

2+3K 73
3LNO 75
3M 77
3Ps 79
4T 81
4VW 83
4X 85
Total 87

Witch flounder

2J-3KL 88
3NO 90
3Ps 92
4RST 94
4VW 96
4X 98
Total 100

Yellowtail flounder

3LNO 101
4VW 103
4X 105
Total 107

Greenland halibut

0B+1B-F 108
SA2+3KLM 110
4RST 112
Total 114

Winter flounder

4T 115
4VW 117
4X 119
Total 121

Atlantic halibut

4RST 122
3NOPs-4VWX 123
Total 125
Flatfish 4VWX - Unsp. 126
Summary 127
FLATFISH - Total 128

Introduction

These data sheets summarize some of the assessment information used in the preparation of the "Report on the Status of Groundfish Stocks in the Canadian Northwest Atlantic" (DFO Atlantic Fisheries Stock Status Report 94/4) and the June 1994 report of the NAFO Scientific Council (NAFO SCS Doc. 94/19).

For each groundfish stock, data are presented on historical catches and Total Allowable Catches (TACs), as well as on trends in estimates of stock abundance (recruitment, total biomass, spawning biomass), in indices of abundance from research vessel surveys, in the performance of commercial fisheries (standardized catch rates) and in other biological information (e.g. fish weight).

For each temporal series, the median value is provided as a measure of central tendency for the series. The minimum and maximum values are also identified, together with the first and third quartiles. These measurements, which have generally been made for the 1960-1993 period, could serve to evaluate where annual values of a time series lie with respect to the long term.

Catch statistics are reported by "stock unit" and may thus not correspond exactly to the statistics reported in management plans or other reports. Also, the catch information has been corrected to take into consideration some (but not all) of the misreporting (e.g. when surveillance information is available).

These data are documented in detail in research documents published regularly in the DFO Atlantic Fisheries Research Document series, in various DFO reports and in publications of the Northwest Atlantic Fisheries Organization. They have been presented here in a standard format to facilitate the preparation of overviews or various briefing material. Scientific publications making use of this information must make reference to the original research documents where the original data, their treatment and their limitations are explained in detail.

Cod in 2GH
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0		53 717							
1954			0		1 699							
1955			0		765							
1956			0		178							
1957			0		963							
1958			0		2 528							
1959			0		2 994							
1960			1 000	7 000	8 000							
1961			1 000	3 000	4 000							
1962			1 199	3 735	4 934							
1963			930	3 084	4 014							
1964			829	8 318	9 147							
1965			1 217	63 028	64 245							
1966			1 311	92 878	94 189							
1967			4	56 131	56 135							
1968			523	83 894	84 417							
1969			320	63 297	63 617							
1970			75	17 712	17 787							
1971			7	12 632	12 639							
1972			4	13 686	13 690							
1973			3	294	297							
1974			0	4 070	4 070	20 000						
1975			7	6 952	6 959	20 000						
1976			39	5 890	5 929	20 000						
1977			41	3 617	3 658	20 000						
1978			37	4 821	4 858	20 000						
1979			126	2 054	2 180	20 000						
1980			106	2 512	2 618	20 000						
1981			405	3 245	3 650	20 000						
1982			3 252	10 259	13 511	20 000						
1983			265	2 116	2 381	20 000						
1984			252	1 279	1 531	20 000						
1985			229	318	547	20 000						
1986			345	149	494	20 000						
1987			8	126	134	20 000						
1988			496	0	496	20 000						
1989			449	0	449	20 000						
1990			431	16	447	20 000						
1991			0	0	0	20 000						
1992			0	0	0	20 000						
1993			3	0	3	1 000						
1994			0		0	1 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					0							
1st quart.					509							
MEDIAN					3 322							
3rd quart.					8 860							
Maximum					94 189							

Cod in 2J-3KL
May 94

YEAR	Catches (t)					TAC (t)	F	Expl. rate	Recruits	Stock Size	Biomass	
	Canadian			Foreign	TOTAL		7 to 9	7 to 9 (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	Spawning 7+ (000 t)
	Fixed	Mobile	Total									
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959	159 492	4 515	164 007	195 565	359 572							
1960	157 286	7 409	164 695	294 104	458 799							
1961	119 363	4 676	124 039	374 039	498 078							
1962	138 511	4 173	142 684	360 068	502 752		0.32	0.25			2 962	1 599
1963	144 548	4 447	148 995	360 214	509 209		0.30	0.24			2 642	1 368
1964	131 328	9 418	140 746	461 905	602 651		0.41	0.31			2 531	1 428
1965	110 527	7 035	117 562	427 473	545 035		0.55	0.39			2 381	1 187
1966	110 843	8 305	119 148	405 357	524 505		0.40	0.30			2 329	963
1967	101 859	13 620	115 479	496 285	611 764		0.43	0.32			2 377	907
1968	101 037	22 283	123 320	686 694	810 014		0.60	0.41			2 324	882
1969	97 224	18 115	115 339	638 351	753 690		0.82	0.51			2 002	810
1970	76 588	10 826	87 414	432 812	520 226		0.58	0.40			1 689	627
1971	62 539	6 175	68 714	370 804	439 518		0.48	0.35			1 598	604
1972	62 052	3 789	65 841	392 454	458 295		0.51	0.37			1 393	606
1973	41 648	2 489	44 137	310 372	354 509	666 000	0.50	0.36			984	479
1974	35 181	899	36 080	336 570	372 650	657 000	0.50	0.36			752	424
1975	41 213	1 269	42 482	245 026	287 508	554 000	0.98	0.58			568	285
1976	59 939	3 052	62 991	151 229	214 220	300 000	1.16	0.63			525	159
1977	72 623	6 938	79 561	93 159	172 720	160 000	0.51	0.37			526	93
1978	81 455	20 922	102 377	36 182	138 559	135 000	0.53	0.38			597	109
1979	85 822	44 965	130 787	36 112	166 899	180 000	0.47	0.34			696	141
1980	96 523	51 041	147 564	28 224	175 788	180 000	0.32	0.25			784	270
1981	80 038	66 997	147 035	23 677	170 712	200 000	0.35	0.27			889	373
1982	113 049	94 457	207 506	22 268	229 774	237 000	0.47	0.34			945	414
1983	106 423	108 034	214 457	17 888	232 345	260 000	0.46	0.34			1 035	334
1984	97 721	104 936	202 657	29 814	232 471	266 000	0.51	0.37			1 181	277
1985	79 883	107 211	187 094	44 199	231 293	266 000	0.55	0.39			1 146	314
1986	72 369	111 551	183 920	67 586	251 506	266 000	0.53	0.37			1 066	308
1987	78 747	120 188	198 935	36 075	235 010	256 000	0.57	0.40			955	329
1988	101 035	140 835	241 870	26 807	268 677	266 000	0.75	0.49			918	387
1989	102 869	111 756	214 625	38 799	253 424	235 000	1.00	0.58			943	391
1990	112 533	70 884	183 417	35 271	218 688	199 262	1.34	0.68			1 034	297
1991	59 830	60 286	120 116	50 753	170 869	190 000	2.23	0.84			704	131
1992	11 794	17 002	28 796	14 883	43 679	0	1.17	0.64			108	15
1993	8 998	2	9 000	2 425	11 425	0						
1994						0						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					11 425	0	0.30	0.24			108	15
1st quart.					216 454	180 000	0.47	0.34			768	281
MEDIAN					268 677	236 000	0.51	0.37			1 034	387
3rd quart.					500 415	266 000	0.68	0.45			1 846	719
Maximum					810 014	666 000	2.23	0.84			2 962	1 599

1991 ass. for 62-90; annual thereafter

From 1993 NAFO SC - ADAPT

Cod in 2J-3KL

	Abundance indices									RV Mean weight at age 6 (kg)
	RV Nb/tow		RV Index							
YEAR	Estimate 1+	Estimate 6+	Stock Size 2J	Biomass 2J	Stock Size 3K	Biomass 3K	Stock Size 3L	Biomass 3L	CPUE Index (ages)	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978	40.11	8.84	102 999	172 443	84 311	148 482				
1979	45.80	14.57	81 672	158 574	134 903	267 862				
1980	43.21	20.41	104 895	235 005	72 521	159 298				
1981	36.26	23.39	94 961	228 757	81 732	178 220	62 303	112 086		1.85
1982	36.01	17.39	117 410	216 540	63 717	136 326	56 265	88 586		1.96
1983	57.38	16.61	180 291	267 123	94 508	175 936	103 140	152 325	38.100	2.00
1984	60.87	17.59	139 339	181 681	96 355	179 468	165 002	190 480	48.110	1.78
1985	45.25	14.50	120 092	136 693	51 652	86 029	125 933	164 451	64.820	1.44
1986	98.67	39.93	301 831	404 642	225 648	356 203	121 853	191 326	68.230	1.42
1987	41.96	20.88	117 446	175 466	71 544	123 283	87 504	151 936	58.480	1.38
1988	41.11	25.97	137 209	249 135	54 871	75 437	78 420	139 727	49.260	1.43
1989	55.20	22.89	105 601	140 829	209 692	290 535	48 577	73 512	57.460	1.52
1990	50.93	16.14	35 865	32 853	171 919	193 130	127 023	210 203	67.310	1.63
1991	33.18	5.49	46 264	28 511	130 316	125 576	41 616	52 073	44.160	1.44
1992	8.96	1.85	4 242	2 140	10 345	8 974	44 369	51 146		1.35
1993	2.41	0.27	1 735	868	4 464	2 932	9 692	8 977		1.29
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	2.4	0.3	1 735	868	4 464	2 932	9 692	8 977	38.10	1.29
1st Q	36.2	13.1	72 820	110 733	61 506	113 970	48 577	73 512	48.11	1.42
Med.	42.6	17.0	105 248	173 955	83 022	153 890	78 420	139 727	57.46	1.44
3rd Q	52.0	21.4	124 371	230 319	131 463	182 884	121 853	164 451	64.82	1.78
Max.	98.7	39.9	301 831	404 642	225 648	356 203	165 002	210 203	68.23	2.00

Cod in 2J-3KL Alternate Methods or C.I.

	NAFO SC 1993 ADAPT						NAFO SC 1993 LS					
	F 7 to 9	Expl. rate 7 to 9 (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass Total 3+ (000 t)	Biomass Spawning 7+ (000 t)	F 7 to 9	Expl. rate 7 to 9 (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass Total 3+ (000 t)	Biomass Spawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960												
1961												
1962	0.32	0.25	725		2 977	1 611	0.32	0.25	725		2 977	1 611
1963	0.30	0.24	640		2 655	1 379	0.30	0.24	640		2 655	1 379
1964	0.42	0.31	880		2 541	1 437	0.42	0.31	880		2 541	1 437
1965	0.55	0.39	1 040		2 390	1 196	0.55	0.39	1 040		2 390	1 196
1966	0.40	0.30	1 196		2 336	971	0.40	0.30	1 196		2 336	971
1967	0.43	0.32	865		2 382	912	0.43	0.32	865		2 382	912
1968	0.60	0.41	730		2 329	886	0.60	0.41	730		2 329	886
1969	0.82	0.51	670		2 006	814	0.82	0.51	670		2 006	814
1970	0.58	0.40	740		1 693	630	0.58	0.40	740		1 693	630
1971	0.48	0.35	597		1 601	606	0.48	0.35	597		1 601	606
1972	0.51	0.37	255		1 394	607	0.51	0.37	255		1 394	607
1973	0.50	0.36	141		983	479	0.50	0.36	141		983	479
1974	0.50	0.36	138		752	424	0.50	0.36	138		752	424
1975	0.98	0.58	233		568	284	0.98	0.58	233		568	284
1976	1.16	0.63	413		526	160	1.16	0.63	413		526	160
1977	0.51	0.37	342		526	94	0.51	0.37	342		526	94
1978	0.53	0.38	302		597	110	0.53	0.38	302		597	110
1979	0.47	0.34	153		695	142	0.47	0.34	153		695	142
1980	0.32	0.25	161		781	270	0.32	0.25	161		781	270
1981	0.35	0.27	360		882	373	0.35	0.27	360		882	373
1982	0.47	0.34	321		931	413	0.47	0.34	321		931	413
1983	0.46	0.34	350		1 007	332	0.46	0.34	350		1 007	332
1984	0.51	0.37	432		1 125	272	0.51	0.37	432		1 125	272
1985	0.55	0.39	339		1 061	301	0.55	0.39	338		1 060	301
1986	0.53	0.38	158		952	287	0.53	0.38	158		951	287
1987	0.57	0.40	130		814	295	0.57	0.40	129		812	294
1988	0.75	0.48	167		704	323	0.75	0.48	160		699	323
1989	1.00	0.58	223		590	280	1.00	0.58	185		569	279
1990	1.34	0.68	238		472	151	1.36	0.69	117		405	150
1991	2.23	0.84	101		330	61	2.51	0.86	64		242	59
1992	1.17	0.64	79		210	22	2.86	0.89	68		108	15
1993												
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Min.	0.30	0.24	79		210	22	0.30	0.24	64		108	15
1st Q	0.47	0.34	164		646	271	0.47	0.34	159		646	271
Med.	0.51	0.37	339		952	332	0.51	0.37	338		951	332
3rd Q	0.68	0.45	655		1 850	722	0.68	0.45	655		1 850	722
Max.	2.23	0.84	1 196		2 977	1 611	2.86	0.89	1 196		2 977	1 611

Cod in 2J-3KL **Relative Indices based on the 1993 NAFO Assessment**

	Relative Indices						Absolute RV					
	Biomass from RV 2J	Biomass from RV 3K	Biomass from RV 3L	Biomass from RV 2J3KL	Biomass Total Ages 3+	Biomass pawning Ages 7+					Biomass RV 3+	Biomass pawning 7+
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960												
1961												
1962					3.13	1.69						
1963					2.79	1.45						
1964					2.67	1.51						
1965					2.51	1.26						
1966					2.45	1.02						
1967					2.50	0.96						
1968					2.45	0.93						
1969					2.11	0.86						
1970					1.78	0.66						
1971					1.68	0.64						
1972					1.46	0.64						
1973					1.03	0.50						
1974					0.79	0.45						
1975					0.60	0.30						
1976					0.55	0.17						
1977					0.55	0.10						
1978	0.99	0.96	0.00		0.63	0.12						
1979	0.91	1.74	0.00		0.73	0.15						
1980	1.35	1.04	0.00		0.82	0.28						
1981	1.32	1.16	0.80	1.21	0.93	0.39					519 063	
1982	1.24	0.89	0.63	1.03	0.98	0.43					441 452	
1983	1.54	1.14	1.09	1.39	1.06	0.35					595 384	
1984	1.04	1.17	1.36	1.28	1.18	0.29					551 629	
1985	0.79	0.56	1.18	0.90	1.11	0.32					387 173	
1986	2.33	2.31	1.37	2.22	1.00	0.30					952 171	
1987	1.01	0.80	1.09	1.05	0.86	0.31					450 685	
1988	1.43	0.49	1.00	1.08	0.74	0.34					464 299	
1989	0.81	1.89	0.53	1.18	0.62	0.29					504 876	
1990	0.19	1.25	1.50	1.02	0.50	0.16					436 186	
1991	0.16	0.82	0.37	0.48	0.35	0.06					206 159	
1992	0.01	0.06	0.37	0.14	0.22	0.02					62 260	
1993	0.00	0.02	0.06	0.03							12 763	
1994												
1995												
1996												
1997												
1998												
1999												
2000												

Cod in 3M

June 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0	1 000	1 000							
1961			0	20 000	20 000							
1962			349	15 558	15 907							
1963			0	35 482	35 482							
1964			0	42 734	42 734							
1965			8	56 321	56 329							
1966			0	29 972	29 972							
1967			46	37 998	38 044							
1968			235	35 464	35 699							
1969			22	23 918	23 940							
1970			1	19 720	19 721							
1971			0	26 183	26 183							
1972			7	57 757	57 764							
1973			18	22 882	22 900							
1974			63	24 875	24 938	40 000						
1975			108	22 267	22 375	40 000						
1976			134	22 132	22 266	40 000						
1977			158	26 861	27 019	25 000						
1978			139	32 992	33 131	40 000						
1979			2	29 708	29 710	40 000						
1980			25	13 691	13 716	13 000						
1981			3	13 870	13 873	12 800						
1982			0	12 753	12 753	12 400						
1983			0	11 704	11 704	12 400						
1984			0	12 702	12 702	12 900						
1985			0	13 675	13 675	12 970						
1986			0	14 518	14 518	12 970						
1987			0	10 632	10 632	12 970						
1988			0	1 718	1 718	0						
1989			0	40 000	40 000	0						
1990			1	31 999	32 000	0						
1991			0	11 000	11 000	12 965						
1992			0	11 000	11 000	12 965						
1993			0	12 500	12 500	12 965						
1994			0			13 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					1 000							
1st quart.					12 984							
MEDIAN					22 321							
3rd quart.					31 493							
Maximum					57 764							

Cod in 3M

	Abundance indices								
	EEC RV (t)			Russia RV (t)		EEC RV (t)			
YEAR	Estimate All ages	Lower limit	Upper limit	Estimate bottom All ages	Bottom plus pelagic	Estimate SSB 5+	Lower limit	Upper limit	Mean weight at age 7 (kg)
1948									
1949									
1950									
1951									
1952									
1953									
1954									
1955									
1956									
1957									
1958									
1959									
1960									
1961									
1962									
1963									
1964									
1965									
1966									
1967									
1968									
1969									
1970									
1971									
1972									
1973									
1974									
1975									
1976									
1977									
1978									
1979									
1980									
1981									
1982									
1983				23 070					
1984				31 210					
1985				28 070					
1986				26 060					
1987				10 150	21 600				
1988	37 127			7 720	34 200	4 218			
1989	103 644			36 520	78 300	32 345			
1990	55 360			3 920	17 300	34 259			
1991	36 597			6 740	8 200	16 218			
1992	24 295				2 500	4 543			
1993	55 642					5 599			
1994									
1995									
1996									
1997									
1998									
1999									
2000									
Min.	24 295			3 920	2 500	4 218			
1st Q	36 730			7 720	10 475	4 807			
Med.	46 244			23 070	19 450	10 909			
3rd Q	55 572			28 070	31 050	28 313			
Max.	103 644			36 520	78 300	34 259			

Cod in 3NO
February 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT Flattop					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7-10	(ages) (%)	Age x (million)	(ages) (million)	Total 3+ (000 t)	Spawning 6+ (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			39 884	26 313	66 197							
1954			17 392	117 369	134 761							
1955			6 053	108 303	114 356							
1956			5 363	64 882	70 245							
1957			9 641	80 549	90 190							
1958			4 812	43 239	48 051							
1959			3 687	60 683	64 370		0.41	0.31	54		207	109
1960			3 408	76 269	79 677		0.42	0.31	53		191	85
1961			5 428	67 296	72 724		0.40	0.30	82		184	106
1962			3 235	31 170	34 405		0.36	0.28	108		188	86
1963			5 079	67 030	72 109		0.72	0.47	79		227	101
1964			2 882	64 255	67 137		0.37	0.28	112		257	119
1965			4 229	96 007	100 236		0.93	0.56	162		291	155
1966			6 501	103 229	109 730		1.30	0.67	210		359	137
1967			3 446	224 608	228 054		0.64	0.43	183		404	126
1968			3 287	163 469	166 756		0.60	0.41	100		327	113
1969			3 664	115 558	119 222		0.49	0.36	128		248	96
1970			4 771	108 481	113 252		0.46	0.33	80		238	97
1971			2 311	123 923	126 234		0.50	0.36	84		245	107
1972			1 736	101 687	103 423		0.48	0.35	62		206	103
1973			1 832	78 597	80 429	103 000	0.37	0.28	35		182	82
1974			1 360	72 029	73 389	101 000	0.96	0.57	36		125	84
1975			1 189	42 985	44 174	88 000	1.74	0.77	23		63	35
1976			2 065	22 218	24 283	43 000	0.34	0.26	28		46	13
1977			2 532	15 072	17 604	30 000	0.66	0.44	45		60	18
1978			6 246	8 472	14 718	15 000	0.27	0.22	41		90	20
1979			9 938	18 002	27 940	25 000	0.26	0.21	18		99	31
1980			5 589	15 182	20 771	26 000	0.17	0.14	20		103	50
1981			6 096	18 248	24 344	26 000	0.24	0.19	28		138	85
1982			10 185	21 420	31 605	17 000	0.36	0.28	22		153	95
1983			11 374	17 750	29 124	17 000	0.24	0.20	36		165	95
1984			8 705	18 398	27 103	26 000	0.29	0.23	42		181	102
1985			18 179	18 720	36 899	33 000	0.29	0.23	33		167	99
1986			18 035	32 610	50 645	33 000	0.32	0.25	9		155	105
1987			18 652	22 967	41 619	33 000	0.37	0.28	7		135	106
1988			19 727	23 423	43 150	40 000	0.46	0.34	14		100	81
1989			13 514	19 742	33 256	25 000	0.37	0.28	14		79	59
1990			10 660	18 722	29 382	18 600	0.37	0.28	6		66	48
1991			12 056	17 333	29 389	13 600	0.64	0.43	8		51	39
1992			7 684	4 876	12 560	13 600	0.31	0.25	47		39	23
1993			5 326	4 402	9 728	10 200	0.19	0.16	33		44	15
1994			0			6 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					9 728		0.17	0.14	6		39	13
1st quart.					29 382		0.32	0.25	22		94	49
MEDIAN					50 645		0.37	0.28	41		165	95
3rd quart.					90 190		0.55	0.39	81		217	105
Maximum					228 054		1.74	0.77	210		404	155

Cod in 3NO

	Abundance indices									Mean weight at age 7 (kg)
	CAN spring RV (nb/tow)			Other			CAN Otter trawl (t/hr)			
YEAR	Estimate 1+	Estimate 5+		Rus. Abun Spring	Can Abun Fall	Can Abun Juvenile	Estimate All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971	36.93	4.92								
1972	33.24	4.30								2.89
1973	10.56	4.09								3.63
1974	6.97	1.02								2.86
1975	11.87	2.03								3.14
1976	10.89	2.21								3.25
1977	25.17	7.20		161			1.028	0.582	1.474	3.51
1978	21.03	4.28		120			0.849	0.567	1.131	3.74
1979	25.57	10.41		44			1.145	0.785	1.505	2.87
1980	9.77	2.42		46			0.933	0.577	1.289	3.69
1981	13.66	6.49		38			1.206	0.764	1.648	3.55
1982	16.82	2.79		136			1.536	1.040	2.032	3.83
1983				137			1.460	1.026	1.894	3.80
1984	38.10	18.67		259			1.189	0.809	1.569	3.04
1985	20.40	9.39		521			1.223	0.843	1.603	3.25
1986	22.02	13.09		270			1.085	0.757	1.413	3.49
1987	85.69	70.77		54			1.068	0.752	1.384	2.89
1988	12.54	8.16		55			1.111	0.773	1.449	2.23
1989	8.44	5.19		13		141	1.064	0.732	1.396	3.27
1990	9.15	6.35		5	25	315	1.058	0.722	1.394	2.73
1991	10.77	2.61		36	71	440	0.534	0.358	0.710	3.83
1992	6.40	1.16			66	104	0.471	0.299	0.643	2.82
1993	35.65	3.33		114	13	83				2.79
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	6.4	1.0		5	13	83	0.47	0.30	0.64	2.23
1st Q	10.6	2.7		43	22	104	1.00	0.58	1.36	2.88
Med.	15.2	4.6		85	46	141	1.08	0.75	1.43	3.25
3rd Q	25.5	7.9		143	67	315	1.19	0.79	1.58	3.61
Max.	85.7	70.8		521	71	440	1.54	1.04	2.03	3.83

Cod in 3NO Alternate Methods or C.I.

	ADAPT -DOME PR						Method 3					
	F (7-10)	Expl. rate (ages) (%)	Recruits Age 3 (million)	Stock Size (ages) (million)	Biomass Total 3+ (000 t)	Biomass Spawning (000 t)	F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass Total (ages) (000 t)	Biomass Spawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959	0.41	0.31	54		217	115						
1960	0.42	0.31	53		210	108						
1961	0.40	0.30	82		188	97						
1962	0.36	0.28	108		196	93						
1963	0.72	0.47	79		231	104						
1964	0.37	0.28	113		258	115						
1965	0.93	0.56	163		294	144						
1966	1.29	0.67	210		360	139						
1967	0.63	0.43	184		410	135						
1968	0.59	0.41	102		330	119						
1969	0.48	0.35	129		259	106						
1970	0.44	0.33	81		266	121						
1971	0.48	0.35	87		263	120						
1972	0.45	0.33	64		220	107						
1973	0.34	0.26	38		195	94						
1974	0.81	0.51	42		154	101						
1975	0.97	0.57	27		83	49						
1976	0.13	0.11	36		70	29						
1977	0.22	0.18	57		98	41						
1978	0.08	0.07	73		153	50						
1979	0.10	0.09	26		170	68						
1980	0.07	0.06	27		190	100						
1981	0.11	0.09	34		254	161						
1982	0.14	0.12	32		290	203						
1983	0.10	0.08	46		315	220						
1984	0.12	0.11	51		331	223						
1985	0.16	0.13	38		315	229						
1986	0.16	0.13	11		308	243						
1987	0.17	0.14	7		284	242						
1988	0.22	0.18	15		195	165						
1989	0.19	0.16	16		164	140						
1990	0.18	0.15	7		144	123						
1991	0.29	0.23	10		129	114						
1992	0.13	0.11	57		112	91						
1993	0.09	0.08	40		95	59						
1994					132							
1995					227							
1996												
1997												
1998												
1999												
2000												
Min.	0.07	0.06	7		70	29						
1st Q	0.14	0.12	30		154	95						
Med.	0.29	0.23	51		217	115						
3rd Q	0.46	0.34	82		284	142						
Max.	1.29	0.67	210		410	243						

Cod in 3Ps

May 94

YEAR	Catches (t)					TAC (t) by Canada	Assessment Results: SPA					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				6+	6+ (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	SSB 7+ (000 t)
1948												
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959	32 718	7 510	40 228	19 942	60 170		0.41	0.31	59	261	293	123
1960	40 059	6 875	46 934	25 702	72 636		0.48	0.35	59	238	288	119
1961	32 506	6 050	38 556	45 064	83 620		0.67	0.45	51	203	262	111
1962	29 888	2 650	32 538	20 101	52 639		0.39	0.29	49	174	213	102
1963	30 447	11 430	41 877	9 944	51 821		0.37	0.28	43	157	196	94
1964	23 897	2 531	26 428	30 139	56 567		0.55	0.39	71	177	196	95
1965	25 902	3 662	29 564	22 290	51 854		0.55	0.38	81	202	201	85
1966	23 785	6 056	29 841	36 366	66 207		0.73	0.47	84	223	212	81
1967	26 331	5 120	31 451	31 323	62 774		0.43	0.32	98	242	208	58
1968	22 938	7 123	30 061	47 495	77 556		0.42	0.31	70	234	221	62
1969	20 009	5 118	25 127	38 672	63 799		0.56	0.39	54	210	222	68
1970	23 410	6 816	30 226	46 632	76 858		0.50	0.36	35	176	212	74
1971	26 651	9 388	36 039	26 409	62 448		0.63	0.43	60	166	188	85
1972	19 276	3 575	22 851	21 362	44 213		0.64	0.43	39	140	156	68
1973	21 349	3 288	24 637	28 004	52 641	70 500	0.78	0.50	30	125	144	61
1974	15 999	4 427	20 426	26 286	46 712	70 000	1.16	0.63	41	116	120	40
1975	14 332	863	15 195	20 178	35 373	62 400	0.91	0.55	54	121	103	36
1976	20 978	2 330	23 308	13 825	37 133	47 500	0.36	0.27	57	132	96	18
1977	23 755	5 504	29 259	2 986	32 245	32 500	0.49	0.35	75	156	138	20
1978	19 560	2 782	22 342	4 879	27 221	25 000	0.53	0.37	39	146	133	23
1979	23 413	3 244	26 657	6 349	33 006	25 000	0.43	0.32	23	125	133	31
1980	29 427	3 524	32 951	4 617	37 568	28 000	0.62	0.42	36	118	147	44
1981	26 068	5 017	31 085	7 807	38 892	30 000	0.54	0.38	64	142	157	59
1982	21 351	5 587	26 938	6 964	33 902	33 000	0.48	0.35	44	142	150	51
1983	23 915	4 680	28 595	9 856	38 451	33 000	0.44	0.33	73	172	193	44
1984	22 865	2 864	25 729	11 221	36 950	33 000	0.33	0.26	65	187	237	51
1985	24 854	8 005	32 859	18 508	51 367	41 000	0.49	0.35	52	187	245	65
1986	24 208	7 101	31 309	25 981	57 290	41 000	0.55	0.38	26	152	200	60
1987	26 589	6 200	32 789	24 512	57 301	41 000	0.66	0.44	36	129	168	57
1988	19 742	5 965	25 707	17 670	43 377	41 000	0.59	0.41	48	124	144	49
1989	23 208	5 459	28 667	10 873	39 540	35 400	0.46	0.34	51	130	141	43
1990	20 047	6 279	26 326	14 927	41 253	35 400	0.58	0.40	39	122	139	36
1991	21 297	5 991	27 288	15 787	43 075	35 400	0.70	0.46	17	93	111	28
1992	17 940	6 533	24 473	7 052	31 525	35 400	0.70	0.46	22	72	81	24
1993	11 533	3 338	14 871	40	14 911	20 000			39	80	80	23
1994			0			0						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					14 911		0.33	0.26	17	72	80	18
1st quart.					37 351		0.45	0.33	39	125	139	38
MEDIAN					46 712		0.54	0.38	51	152	168	58
3rd quart.					58 736		0.64	0.43	62	187	212	78
Maximum					83 620		1.16	0.63	98	261	293	123

Cod in 3Ps

	Abundance indices									
	RV Canada (#/tow)			RV Canada (wgt/tow)			CPUE (units)			
YEAR	Estimate Feb. All ages	April All ages		Estimate Feb. All ages	April All ages	Upper limit	Estimate (ages)	Lower limit	Upper limit	Mean weight at age 7 (kg)
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973	5.90			7.70						
1974	9.02			11.23						
1975	4.27			6.05						
1976	11.52			17.71						
1977	6.51			9.14						2.67
1978	7.82			12.59						2.45
1979	28.18			29.81						2.55
1980	14.82			21.20						2.48
1981	30.95			52.64						2.30
1982	15.28			21.87						2.36
1983	12.34			35.84						2.58
1984	6.28			18.87						2.64
1985	20.14			41.94						2.51
1986	20.93			43.56						2.43
1987	29.64			57.63						2.31
1988	25.22			64.88						2.17
1989	10.39			32.57						2.25
1990	25.46			37.38						2.45
1991	27.14			41.99						2.37
1992	9.03			12.23						2.25
1993	6.33	4.91		7.77	5.68					2.13
1994		9.76			9.97					
1995										
1996										
1997										
1998										
1999										
2000										
Min.	4.27	4.91		6.05	5.68					2.13
1st Q	7.82	6.12		12.23	6.75					2.30
Med.	12.34	7.34		21.87	7.83					2.43
3rd Q	25.22	8.55		41.94	8.90					2.51
Max.	30.95	9.76		64.88	9.97					2.67

Cod in 3Ps

Alternate Methods or C.I.

	Maturity						Method 3					
	Age 50% mat.											
	Males	Females					F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass Total (ages) (000 t)	Biomass Spawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960												
1961												
1962												
1963												
1964												
1965												
1966												
1967												
1968												
1969												
1970												
1971												
1972												
1973												
1974												
1975												
1976												
1977												
1978	6.01	6.35										
1979	5.87	6.64										
1980	4.66	6.08										
1981	4.98	5.35										
1982	5.38	6.40										
1983	5.31	5.79										
1984	5.58	5.85										
1985	6.87	5.75										
1986	6.02	6.23										
1987	6.18	6.52										
1988	5.42	7.05										
1989	5.60	6.54										
1990	5.43	5.93										
1991	4.39	5.21										
1992	5.12	5.01										
1993	4.54	5.21										
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Min.	4.39	5.01										
1st Q	5.09	5.65										
Med.	5.43	6.01										
3rd Q	5.91	6.43										
Max.	6.87	7.05										

Cod in 3Pn-4RS

May 94

							Assessment Results: ADAPT					
	Catches (t)					TAC (t)	F	Expl. rate	Recruits	Stock Size	Biomass	
YEAR	Canadian			Foreign	TOTAL						Total	Adult
	Fixed	Mobile	Total				(7-9)	(7-9) (%)	Age 3 (million)	3+ (million)	3+ (000 t)	7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960	29 619	14 731	44 350	50 000	94 350							
1961	28 673	9 337	38 010	62 000	100 010							
1962	38 471	4 053	42 524	43 397	85 921							
1963	41 911	6 299	48 210	26 536	74 746							
1964	34 413	6 149	40 562	43 672	84 234							
1965	28 842	7 773	36 615	32 314	68 929							
1966	24 970	11 280	36 250	28 835	65 085							
1967	30 445	6 334	36 779	42 533	79 312							
1968	37 859	12 090	49 949	39 722	89 671							
1969	33 045	16 943	49 988	21 152	71 140							
1970	24 387	20 301	44 688	60 777	105 465							
1971	23 041	9 189	32 230	51 580	83 810							
1972	19 913	10 813	30 726	27 511	58 237							
1973	24 779	3 592	28 371	37 434	65 805							
1974	20 529	13 642	34 171	32 265	66 436		0.42	0.31	108	310	261	107
1975	20 567	8 022	28 589	31 644	60 233		0.36	0.28	138	351	271	117
1976	26 629	16 077	42 706	34 275	76 981	55 000	0.47	0.34	118	374	315	110
1977	24 688	30 740	55 428	18 138	73 566	55 000	0.57	0.40	161	431	342	98
1978	33 042	29 693	62 735	15 771	78 506	55 000	0.42	0.31	174	488	401	94
1979	38 474	30 534	69 008	13 769	82 777	75 000	0.49	0.36	127	484	387	118
1980	51 478	36 705	88 183	9 396	97 579	75 000	0.50	0.36	196	546	426	124
1981	45 801	39 602	85 403	12 508	97 911	75 000	0.41	0.31	122	512	457	151
1982	49 395	43 531	92 926	12 013	104 939	93 300	0.53	0.38	112	477	454	163
1983	49 617	45 779	95 396	10 684	106 080	100 000	0.37	0.28	125	458	446	157
1984	41 783	50 237	92 020	11 623	103 643	100 000	0.54	0.38	79	398	407	188
1985	35 515	43 589	79 104	9 185	88 289	100 000	0.49	0.36	85	355	353	139
1986	27 279	42 415	69 694	13 122	82 816	92 100	0.69	0.46	55	292	298	114
1987	23 737	41 275	65 012	1 535	66 547	80 300	0.86	0.53	37	225	204	89
1988	18 283	29 669	47 952	0	47 952	73 900	0.53	0.38	41	181	155	59
1989	13 287	31 046	44 333	2 586	46 919	76 540	0.69	0.46	41	158	133	59
1990	8 702	28 761	37 463	2 478	39 941	58 000	0.69	0.46	59	159	127	40
1991	10 530	18 869	29 399	2 402	31 801	35 000	0.57	0.40	33	136	99	26
1992	8 818	17 770	26 588	2 358	28 946	35 000	0.51	0.36	20	108	75	16
1993	8 095	10 076	18 171	0	18 171	18 000	0.60	0.41	31	95	63	10
1994						0			64	127	72	19
1995											106	30
1996												
1997												
1998												
1999												
2000												
Minimum					18 171		0.36	0.28	20	95	63	10
1st quart.					65 265		0.46	0.34	41	159	129	45
MEDIAN					77 744		0.52	0.37	85	351	285	103
3rd quart.					89 326		0.58	0.40	125	458	397	123
Maximum					106 080		0.86	0.53	196	546	457	188

Cod in 3Pn-4RS

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV Biomass (t) - winter			RV Numbers (x 1000)			RV- summer			
	Estimate All ages	Lower limit	Upper limit	Estimate 3+	Lower limit	Upper limit	Biomass (t) All Ages	Number (x1000) 3+		
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										1.67
1975										1.89
1976										2.15
1977										2.02
1978	195 424			135 858						1.98
1979	94 661			77 708						1.87
1980	191 504			169 181						1.91
1981	126 989			97 135						1.85
1982										1.76
1983	212 016			137 724						1.90
1984	341 738			238 623						1.77
1985	157 687			116 735						1.62
1986	280 663			220 189						1.47
1987	49 440			38 625						1.31
1988	95 220			54 987						1.49
1989	50 606			38 253						1.42
1990	38 036			53 729						1.39
1991	126 541			135 329			30 597	60 359		1.38
1992	105 756			107 449			61 408	91 960		1.29
1993	48 524			69 743			20 698	27 284		1.30
1994	16 984			34 158			4 830	8 914		
1995										
1996										
1997										
1998										
1999										
2000							lagged one year			
Min.	16 984			34 158			4 830	8 914		1.29
1st Q	50 315			54 673			16 731	22 692		1.41
Med.	116 149			102 292			25 648	43 822		1.72
3rd Q	192 484			136 325			38 300	68 259		1.89
Max.	341 738			238 623			61 408	91 960		2.15

Cod in 4T-Vn (J.-A.), including Nov.+Dec.
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: Hybrid					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7+	7+ (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	Adult 5+ (000 t)
1948												
1949												
1950					44 023		0.42	0.31	100	329	330	228
1951					34 827		0.28	0.22	109	362	351	281
1952			4T-Vn(j-a)		41 956		0.32	0.25	111	395	403	312
1953					58 911		0.38	0.29	106	412	434	341
1954					63 901		0.52	0.37	77	367	442	365
1955					65 227		0.41	0.31	66	348	472	402
1956					104 469		0.52	0.37	81	335	491	427
1957					89 131		0.49	0.35	106	344	445	364
1958					86 582		0.81	0.51	110	358	398	311
1959					70 720		1.39	0.70	142	389	352	257
1960			41 013	25 000	66 013		0.55	0.39	133	403	312	216
1961			55 583	10 000	65 583		0.66	0.44	46	341	315	236
1962			53 417	13 247	66 664		0.35	0.27	59	302	293	260
1963			53 605	16 597	70 202		0.50	0.36	41	261	248	216
1964			49 939	10 606	60 547		0.48	0.35	59	229	196	163
1965	13 515	44 824	58 339	6 765	65 104		0.71	0.48	51	202	176	135
1966	17 580	32 281	49 861	7 220	57 081		0.62	0.42	58	184	158	118
1967	16 296	21 365	37 661	5 751	43 412		0.48	0.35	97	216	159	110
1968	18 374	27 125	45 499	3 492	48 991		0.67	0.45	87	241	175	112
1969	20 896	26 951	47 847	2 414	50 261		0.51	0.37	51	222	179	133
1970	20 538	28 307	48 845	17 143	65 988		0.81	0.51	47	204	186	154
1971	19 326	29 681	49 007	8 924	57 931		0.58	0.40	89	224	208	146
1972	13 352	34 921	48 273	20 370	68 643		0.53	0.38	35	191	185	129
1973	12 099	22 559	34 658	17 285	51 943		0.53	0.37	49	154	136	106
1974	8 558	21 375	29 933	20 646	50 579	63 000	0.69	0.46	57	149	138	84
1975	10 963	21 191	32 154	11 112	43 266	50 000	0.82	0.51	47	141	124	77
1976	6 395	25 001	31 396	5 947	37 343	30 000	0.55	0.39	121	211	138	73
1977	8 920	17 576	26 496	388	26 884	15 000	0.35	0.27	169	319	213	75
1978	11 847	23 667	35 514	3 506	39 020	38 000	0.44	0.33	165	410	265	132
1979	17 124	37 733	54 857	2 839	57 696	46 000	0.65	0.44	116	424	318	195
1980	14 433	33 771	48 204	9 022	57 226	54 000	0.52	0.37	116	428	355	237
1981	20 075	38 954	59 029	8 118	67 147	53 000	0.81	0.51	85	396	329	236
1982	18 067	36 786	54 853	6 816	61 669	60 000	0.53	0.38	152	430	352	234
1983	17 253	41 233	58 486	5 504	63 990	62 000	0.50	0.36	205	516	351	220
1984	14 516	36 578	51 094	6 470	57 564	67 000	0.67	0.45	109	489	340	219
1985	11 861	45 345	57 206	6 767	63 973	67 000	0.54	0.38	104	470	347	262
1986	11 649	50 321	61 970	6 712	68 682	60 000	0.63	0.43	84	422	328	250
1987	12 872	40 595	53 467	1 125	54 592	45 200	0.47	0.34	67	362	263	220
1988	9 647	46 072	55 719		55 719	54 000	0.62	0.42	55	306	219	180
1989	7 465	49 274	56 739	530	57 269	54 000	0.80	0.50	60	265	201	151
1990	6 429	50 558	56 987	937	57 924	53 000	0.98	0.58	54	224	177	118
1991	4 966	42 834	47 800	1 588	49 388	48 000	1.03	0.59	38	177	139	95
1992	3 989	35 052	39 041	1 610	40 651	43 000	1.12	0.62	37	141	108	70
1993	2 855	2 384	5 239		5 239	13 000	0.19	0.16	27	108	73	49
1994			0			0			44	119	93	61
1995			0								105	68
1996			0								112	79
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					5 239		0.19	0.16	27	108	73	49
1st quart.					49 289		0.48	0.35	51	211	167	111
MEDIAN					57 810		0.54	0.38	81	319	248	180
3rd quart.					65 684		0.68	0.45	109	395	349	244
Maximum					104 469		1.39	0.70	205	516	491	427

Cod in 4T-Vn (J.-A.), including Nov.+Dec.
May 94

4T-Vn(j-a)

YEAR	Catches (t)					TAC (t)	Assessment Results: Hybrid					
	Canadian			Foreign	TOTAL		F 7+	Expl. rate 7+ (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass	
	Fixed	Mobile	Total								Total 3+ (000 t)	Adult 5+ (000 t)
1948												
1949												
1950					44 023		0.42	0.31	100	329	330	228
1951					34 827		0.28	0.22	109	382	351	281
1952					41 956		0.32	0.25	111	395	403	312
1953					58 911		0.38	0.29	108	412	434	341
1954					83 901		0.52	0.37	77	387	442	385
1955					85 227		0.41	0.31	68	348	472	402
1956					104 469		0.52	0.37	81	335	491	427
1957					89 131		0.49	0.35	108	344	445	384
1958					86 582		0.81	0.51	110	358	398	311
1959					70 720		1.39	0.70	142	389	352	257
1960			41 013	25 000	66 013		0.55	0.39	133	403	312	216
1961			55 583	10 000	65 583		0.66	0.44	48	341	315	236
1962			53 417	13 247	66 664		0.35	0.27	59	302	293	260
1963			53 605	16 597	70 202		0.50	0.38	41	261	248	215
1964			49 939	10 608	60 547		0.48	0.35	59	229	196	163
1965	13 515	44 824	58 339	6 765	65 104		0.71	0.48	51	202	178	135
1966	17 580	32 281	49 861	7 220	57 081		0.62	0.42	58	184	158	118
1967	16 296	21 365	37 661	5 751	43 412		0.48	0.35	97	216	159	110
1968	18 374	27 125	45 499	3 492	48 991		0.67	0.45	87	241	175	112
1969	20 896	26 951	47 847	2 414	50 261		0.51	0.37	51	222	179	133
1970	20 538	28 307	48 845	17 143	65 988		0.81	0.51	47	204	186	154
1971	19 326	29 681	49 007	8 924	57 931		0.58	0.40	89	224	208	146
1972	13 352	34 921	48 273	20 370	68 643		0.53	0.38	35	191	185	129
1973	12 099	22 559	34 658	17 285	51 943		0.53	0.37	49	154	136	106
1974	8 558	21 375	29 933	20 646	50 579	63 000	0.69	0.46	57	149	138	84
1975	10 963	21 191	32 154	11 112	43 266	50 000	0.82	0.51	47	141	124	77
1976	6 395	25 001	31 396	5 947	37 343	30 000	0.55	0.39	121	211	138	73
1977	8 920	17 576	26 496	388	26 884	15 000	0.35	0.27	169	319	213	75
1978	11 847	23 667	35 514	3 506	39 020	38 000	0.44	0.33	165	410	265	132
1979	17 124	37 733	54 857	2 839	57 696	46 000	0.65	0.44	116	424	318	195
1980	14 433	33 771	48 204	9 022	57 226	54 000	0.52	0.37	116	428	355	237
1981	20 075	38 954	59 029	8 118	67 147	53 000	0.81	0.51	85	396	329	236
1982	18 067	36 786	54 853	6 816	61 669	60 000	0.53	0.38	152	430	352	234
1983	17 253	41 233	58 486	5 504	63 990	62 000	0.50	0.36	205	516	351	220
1984	14 516	36 578	51 094	6 470	57 564	67 000	0.67	0.45	109	489	340	219
1985	11 861	45 345	57 206	6 767	63 973	67 000	0.54	0.38	104	470	347	262
1986	11 649	50 321	61 970	6 712	68 682	60 000	0.63	0.43	84	422	328	250
1987	12 872	40 595	53 467	1 125	54 592	45 200	0.47	0.34	67	362	263	220
1988	9 647	46 072	55 719		55 719	54 000	0.62	0.42	55	306	219	180
1989	7 465	49 274	56 739	530	57 269	54 000	0.80	0.50	60	265	201	151
1990	6 429	50 558	56 987	937	57 924	53 000	0.98	0.58	54	224	177	118
1991	4 966	42 834	47 800	1 588	49 388	48 000	1.03	0.59	38	177	139	95
1992	3 989	35 052	39 041	1 610	40 651	43 000	1.12	0.62	37	141	108	70
1993	2 855	2 384	5 239		5 239	13 000	0.19	0.16	27	108	73	49
1994			0			0			44	119	93	61
1995			0								105	68
1996			0								112	79
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					5 239		0.19	0.16	27	108	73	49
1st quart.					49 289		0.48	0.35	51	211	167	111
MEDIAN					57 810		0.54	0.38	81	319	248	180
3rd quart.					65 684		0.68	0.45	109	395	349	244
Maximum					104 469		1.39	0.70	205	516	491	427

Cod in 4T-Vn (J.-A.), including Nov.+Dec.

YEAR	Abundance indices								Mean weight at age 7 (kg)
	RV (Nb/tow) - fall			RV (Nb/tow) - fall		OT CPUE (t/hour)			
	Estimate 1+			Estimate 5+		Estimate	Lower limit	Upper limit	
1948									
1949									
1950									
1951									
1952									
1953									
1954									
1955									
1956									
1957									
1958									
1959									
1960									1.97
1961									1.71
1962									1.53
1963									1.18
1964									1.04
1965									1.29
1966									1.58
1967									2.18
1968									2.01
1969									2.20
1970									2.12
1971	32.41	24	41	17.81					2.15
1972	34.34	25	44	14.62					1.52
1973	36.57	23	50	16.03					1.69
1974	30.64	26	35	10.54					1.96
1975	26.58	14	39	10.35					2.36
1976	59.82	40	80	9.50					2.19
1977	50.40	37	64	11.40					2.42
1978	77.83	40	116	23.58					2.27
1979	136.88	105	168	45.60					2.22
1980	134.31	83	185	72.52					1.50
1981	226.65	151	303	125.34					1.39
1982	159.86	98	222	94.62		0.272	0.208	0.336	1.45
1983	165.39	128	202	61.70		0.310	0.239	0.381	1.31
1984	142.30	102	183	79.98		0.254	0.194	0.314	1.38
1985	303.02	72	534	208.64		0.326	0.250	0.402	1.42
1986	276.39	95	458	156.89		0.410	0.314	0.506	1.29
1987	131.67	99	164	87.05		0.397	0.299	0.495	0.99
1988	217.47	144	291	124.52		0.359	0.277	0.441	1.04
1989	159.48	122	197	86.72		0.313	0.241	0.385	1.07
1990	102.40	82	123	46.87		0.277	0.212	0.342	1.17
1991	87.76	57	119	36.49		0.224	0.172	0.276	1.22
1992	45.33	35	56	20.92		0.244	0.186	0.302	1.22
1993	54.38	44	65	29.87		0.159	0.112	0.206	1.40
1994									
1995									
1996									
1997									
1998									
1999									
2000									
Min.	26.6	14	35	9.5		0.16	0.11	0.21	0.99
1st Q	47.9	36	60	16.9		0.25	0.19	0.31	1.29
Med.	102.4	72	123	45.6		0.29	0.23	0.36	1.51
3rd Q	159.7	100	200	86.9		0.33	0.26	0.41	2.09
Max.	303.0	151	534	208.6		0.41	0.31	0.51	2.42

Cod in 4Vn (M.-O.)
May 94

May-Dec.

							Assessment Results: ADAPT					
	Catches (t)					TAC (t)	F	Expl. rate	Recruits	Stock Size	Biomass	
YEAR	Canadian			Foreign	TOTAL		(ages)	(ages)	Age x	(ages)	Total (ages)	SSB (ages)
	Fixed	Mobile	Total					(%)	(million)	(million)	(000 t)	(000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			7 000	1 000	8 000							
1961			3 000	1 000	4 000							
1962			6 000	2 000	8 000							
1963			7 213	431	7 644							
1964			9 420	1 158	10 578							
1965			7 130	2 784	9 914							
1966			6 983	660	7 643							
1967			5 415	114	5 529							
1968			4 524	88	4 612							
1969			6 575	123	6 698							
1970			8 371		8 371							
1971			9 075		9 075							
1972			7 587		7 587							
1973			4 440		4 440							
1974			4 157		4 157	10 000						
1975			3 203		3 203	10 000						
1976			2 029		2 029	10 000						
1977			3 256		3 256	3 500						
1978			4 421		4 421	3 500						
1979			4 674		4 674	3 500						
1980			7 580		7 580	5 000						
1981			10 651		10 651	10 000						
1982			8 859		8 859	14 000						
1983			6 713		6 713	14 000						
1984			8 329		8 329	14 000						
1985			10 572		10 572	12 000						
1986			10 323		10 323	12 000						
1987			8 928		8 928	9 000						
1988			7 871		7 871	7 500						
1989			5 780		5 780	7 500						
1990			3 181		3 181	7 500						
1991			2 784		2 784	10 000						
1992			2 262		2 262	10 000						
1993			650		650	1 800						
1994			0			0						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					650							
1st quart.					4 223							
MEDIAN					7 147							
3rd quart.					8 361							
Maximum					10 651							

Cod in 4Vn (M.-O.)

May 94

May-Dec.

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	SSB (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			7 000	1 000	8 000							
1961			3 000	1 000	4 000							
1962			6 000	2 000	8 000							
1963			7 213	431	7 644							
1964			9 420	1 158	10 578							
1965			7 130	2 784	9 914							
1966			6 983	660	7 643							
1967			5 415	114	5 529							
1968			4 524	88	4 612							
1969			6 575	123	6 698							
1970			8 371		8 371							
1971			9 075		9 075							
1972			7 587		7 587							
1973			4 440		4 440							
1974			4 157		4 157	10 000						
1975			3 203		3 203	10 000						
1976			2 029		2 029	10 000						
1977			3 256		3 256	3 500						
1978			4 421		4 421	3 500						
1979			4 674		4 674	3 500						
1980			7 580		7 580	5 000						
1981			10 651		10 651	10 000						
1982			8 859		8 859	14 000						
1983			6 713		6 713	14 000						
1984			8 329		8 329	14 000						
1985			10 572		10 572	12 000						
1986			10 323		10 323	12 000						
1987			8 928		8 928	9 000						
1988			7 871		7 871	7 500						
1989			5 780		5 780	7 500						
1990			3 181		3 181	7 500						
1991			2 784		2 784	10 000						
1992			2 262		2 262	10 000						
1993			650		650	1 800						
1994			0			0						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					650							
1st quart.					4 223							
MEDIAN					7 147							
3rd quart.					8 361							
Maximum					10 651							

Cod in 4Vn (M.-O.)

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Summer RV (no/tow)			CPUE (t/1000 hks)			CPUE (units)			
	Estimate 1+	Lower limit	Upper limit	Estimate ALl ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	42.96									
1971	114.05									
1972	9.39									
1973	34.28									
1974	9.47									
1975	23.47									
1976	20.21									
1977	17.46									
1978	42.84									
1979	13.66									
1980	63.84									
1981	110.98									
1982	42.73									
1983	63.30									
1984	62.14									
1985	237.94									
1986	59.93									
1987	34.66									
1988	120.39									
1989	135.47			0.28						
1990	37.68			0.20						
1991	29.58			0.17						
1992	80.34			0.23						
1993	39.96			0.15						
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	9.4			0.15						
1st Q	28.1			0.17						
Med.	42.8			0.20						
3rd Q	68.0			0.23						
Max.	237.9			0.28						

Cod in 4VsW

May 94

YEAR	Catch (t)					TAC (t)	Assessment Results: ADAPT					
	Canada			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	4VsW	4T cull	Net				7 to 9	7 to 9 (%)	Age 1 (million)	1+ (million)	Total 1+ (000 t)	SSB 6+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958	17 938		17 938	20 653	38 591				106			
1959	20 069		20 069	45 957	66 026				96			
1960	18 390		18 390	32 255	50 645				108			
1961	19 697		19 697	46 612	66 309				94			
1962	17 579		17 579	47 575	65 154				141			
1963	13 144		13 144	55 029	68 173				159			
1964	14 330		14 330	48 927	63 257				153			
1965	23 104		23 104	47 882	70 986				146			
1966	17 690		17 690	50 835	68 525				154			
1967	18 464		18 464	35 694	54 158				121			
1968	24 888		24 888	55 540	80 428				76			
1969	14 188		14 188	35 977	50 165				99			
1970	11 818		11 818	45 616	57 434		0.33	0.26	85	323	226	64
1971	17 064		17 064	35 499	52 563		0.59	0.41	85	299	193	83
1972	19 987		19 987	41 658	61 645		0.42	0.31	67	268	184	75
1973	15 929		15 929	38 164	54 093	60 500	1.23	0.65	62	226	151	52
1974	10 700		10 700	33 041	43 741	60 000	0.45	0.33	74	215	113	29
1975	9 939		9 939	22 578	32 517	60 000	1.07	0.61	85	220	94	34
1976	9 567		9 567	14 840	24 407	30 000	0.60	0.41	71	220	84	22
1977	9 890		9 890	500	10 390	7 000	0.29	0.23	67	230	104	23
1978	24 642		24 642	763	25 405	7 000	0.28	0.22	102	285	152	38
1979	39 219		39 219	811	40 030	30 000	0.23	0.19	90	311	191	59
1980	48 821		48 821	431	49 252	45 000	0.46	0.34	106	339	208	78
1981	53 053		53 053	665	53 718	50 000	0.44	0.32	112	367	232	79
1982	55 675		55 675	79	55 754	55 600	0.47	0.34	63	337	243	80
1983	50 898		50 898	1 482	52 380	64 000	0.35	0.27	63	313	243	90
1984	52 104		52 104	442	52 546	55 000	0.40	0.30	26	255	235	96
1985	56 553		56 553	902	57 455	55 000	0.64	0.43	27	211	217	102
1986	51 467	3 469	47 998	62	48 060	48 000	0.45	0.33	35	183	175	100
1987	45 430	2 029	43 401	73	43 474	44 000	0.54	0.38	45	172	136	84
1988	38 215	2 496	35 719	141	35 860	38 000	0.67	0.45	51	172	111	70
1989	36 526	2 574	33 952	217	34 169	35 200	0.56	0.39	29	155	103	51
1990	34 136	4 606	29 530	198	29 728	35 200	1.31	0.68	25	136	90	33
1991	32 698	8 761	23 937	217	24 154	35 200	0.74	0.48	55	152	76	19
1992	29 682	4 358	25 324	120	25 444	35 200	1.37	0.69		110	65	19
1993	3 434	0	3 434	40	3 474	11 000	0.28	0.22		72	47	16
1994						0						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					3 474		0.23	0.19	25	72	47	16
1st quart.					35 437		0.39	0.29	62	172	101	32
MEDIAN					51 513		0.47	0.34	85	223	152	62
3rd quart.					58 503		0.65	0.44	106	302	211	81
Maximum					80 428		1.37	0.69	159	367	243	102

Cod in 4VsW

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV (#/tow)			CPUE (t/hour) - ZIFF			CPUE (t/hour) - IOP			
	July 3+	Spring 3+		Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	6.86			0.96	0.77	1.15				
1971	20.44			0.72	0.58	0.86				2.28
1972	16.63			0.78	0.64	0.92				2.29
1973	44.31			0.76	0.62	0.90				2.29
1974	8.77			0.66	0.54	0.79				2.59
1975	7.01			0.47	0.38	0.57				2.34
1976	9.45			0.65	0.53	0.78				3.33
1977	16.09			0.71	0.55	0.88				3.15
1978	22.84			1.43	1.15	1.72				3.39
1979	18.35	4.95		1.37	1.01	1.74				3.08
1980	18.64	10.98		1.34	1.10	1.59				3.10
1981	21.49	28.81		1.36	1.12	1.60				2.96
1982	79.33	41.96		1.63	1.35	1.91	1.750	0.940	2.560	2.73
1983	79.86	80.92		1.62	1.33	1.91	1.580	0.880	2.270	3.09
1984	56.08	24.48		1.76	1.46	2.11	2.960	1.640	4.270	2.69
1985	36.24			2.26	1.85	2.67	3.340	1.850	4.830	2.38
1986	16.99	76.55		2.23	1.82	2.64	2.370	1.030	3.720	2.38
1987	26.98	27.30		1.65	1.34	1.96	2.670	1.430	3.910	1.87
1988	23.21	27.18		1.46	1.19	1.73	2.180	1.220	3.150	1.92
1989	20.06	22.41		1.50	1.22	1.78	2.920	1.560	4.280	2.19
1990	33.16	9.69		1.88	1.53	2.23	1.900	1.040	2.750	1.68
1991	14.40	41.16		1.41	1.14	1.67	1.470	0.770	2.170	1.57
1992	13.94	1.55		1.58	1.27	1.88	1.110	0.580	1.640	1.76
1993	23.70	13.21		0.76	0.53	1.00	1.020	0.510	1.530	1.79
1994		2.91								
1995										
1996										
1997										
1998										
1999										
2000										
Min.	6.9	1.6		0.47	0.38	0.57	1.02	0.51	1.53	1.57
1st Q	15.7	10.3		0.76	0.61	0.92	1.55	0.85	2.25	2.06
Med.	20.3	24.5		1.39	1.13	1.70	2.04	1.04	2.95	2.38
3rd Q	28.5	35.0		1.62	1.33	1.91	2.73	1.46	4.00	3.02
Max.	79.9	80.9		2.26	1.85	2.67	3.34	1.85	4.83	3.39

Cod in 4X
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass (beg yr)	
	M&Q	Nfld	Total				4+	4+ (%)	Age 1 (million)	(ages) (million)	Total 1+ (000 t)	SSB 3+ (000 t)
1948	17 761		17 761	1 999	19 760		0.58	0.40	17		65	54
1949	14 282		14 282	1 799	16 081		0.27	0.22	25		77	58
1950	19 088		19 088	1 581	20 669		0.29	0.23	12		84	66
1951	16 543		16 543	1 639	18 182		0.29	0.23	16		75	62
1952	16 570		16 570	1 651	18 221		0.33	0.26	9		70	58
1953	12 903		12 903	1 461	14 364		0.27	0.22	19		74	62
1954	14 406		14 406	2 542	16 948		0.35	0.27	10		76	62
1955	13 432		13 432	1 378	14 810		0.28	0.22	14		71	60
1956	14 849		14 849	1 663	16 512		0.40	0.30	17		80	58
1957	13 619		13 619	1 083	14 702		0.55	0.39	19		62	45
1958	11 103		11 103	1 110	12 213		0.32	0.25	16		62	45
1959	12 866		12 866	862	13 728		0.53	0.38	24		67	48
1960	12 123		12 123	1 605	13 728		0.47	0.34	30		71	46
1961	12 424		12 424	1 274	13 698		0.31	0.24	19		87	65
1962	14 656		14 656	1 240	15 896		0.32	0.25	23		90	69
1963	15 849		15 849	1 995	17 844		0.45	0.33	34		93	67
1964	20 767		20 767	4 688	25 455		0.76	0.49	43		112	77
1965	24 221		24 221	2 693	26 914		0.46	0.34	21		113	83
1966	24 244		24 244	6 735	30 979		0.57	0.40	17		113	95
1967	27 813		27 813	4 648	32 461		0.44	0.32	16		105	90
1968	30 770		30 770	4 773	35 543		0.63	0.43	14		96	82
1969	24 056		24 056	8 670	32 726		0.57	0.40	21		89	73
1970	18 001		18 001	4 308	22 309		0.36	0.28	19		81	62
1971	20 180		20 180	3 197	23 377	Offshore	0.39	0.29	15		76	60
1972	20 490		20 490	1 902	22 392		0.48	0.35	21		72	56
1973	20 002		20 002	2 222	22 224		0.45	0.33	24		79	57
1974	19 005		19 005	2 166	21 171		0.54	0.38	20		76	56
1975	19 493		19 493	1 595	21 088	5 000	0.44	0.32	25		80	58
1976	16 138		16 138	517	16 655	4 000	0.30	0.24	25		87	67
1977	22 002		22 002	949	22 951	4 000	0.29	0.23	17		92	72
1978	23 719	10	23 729	288	24 017	4 000	0.42	0.31	33		100	77
1979	28 647	28	28 675	47	28 722	4 000	0.50	0.36	29		104	74
1980	30 735	355	31 090	187	31 277	4 000	0.45	0.33	21		105	82
1981	31 043	47	31 090	130	31 220	4 000	0.49	0.35	27		102	80
1982	32 701	9	32 710	235	32 945	30 000	0.60	0.41	13		92	72
1983	28 963		28 963	298	29 261	30 000	0.50	0.36	14		78	68
1984	25 068		25 068	194	25 262	30 000	0.47	0.34	19		70	58
1985	21 370		21 370	9	21 379	30 000	0.59	0.41	10		62	50
1986	19 869		19 869	43	19 912	20 000	0.56	0.39	28		58	46
1987	18 671		18 671	11	18 682	17 500	0.50	0.36	18		65	42
1988	19 766		19 766	4	19 770	14 000	0.59	0.41	26		77	51
1989	19 581		19 581	4	19 585	12 500	0.43	0.32	9			53
1990	23 499		23 499	143	23 642	22 000	0.54	0.38	15			64
1991	27 470		27 470	0	27 470	26 000	0.66	0.44	19			55
1992	25 780		25 780	220	26 000	26 000	1.04	0.60	20			42
1993	15 970		15 970	0	15 970	15 000	0.73	0.48	20			35
1994			0			13 000						38
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					12 213		0.27	0.22	9		58	35
1st quart.					16 728		0.35	0.27	16		71	53
MEDIAN					21 130		0.47	0.34	19		79	60
3rd quart.					25 864		0.56	0.39	24		92	70
Maximum					35 543		1.04	0.60	43		113	95

Cod in 4X

YEAR	Abundance indices									Mean weight at age 5 (kg)
	RV summer biomass			RV summer biomass			CPUE			
	Estimate (000 t) Age 3	Lower limit	Upper limit	Estimate (000 t) Ages 4+	Lower limit	Upper limit	Estimate	OT	LL	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										3.00
1971										2.73
1972	16.869			40.46						2.45
1973	5.37			29.26						3.10
1974	18.57			26.28						2.62
1975	7.50			66.11						3.15
1976	12.73			50.07						3.00
1977	20.36			39.01						2.34
1978	10.27			27.55						2.39
1979	8.49			46.54						3.11
1980	15.12			40.59						2.98
1981	10.74			46.56						2.80
1982	8.94			39.59						2.84
1983	26.01			46.58						2.61
1984	25.18			51.89					2.13	2.73
1985	28.06			45.82					1.83	2.52
1986	16.06			31.40					1.72	2.63
1987	4.08			30.50				0.28	1.80	3.17
1988								0.38	2.66	2.71
1989	24.83			35.48				0.54	2.49	2.76
1990	38.58			58.42				0.52	3.07	3.22
1991	7.12			45.68				0.42	2.78	2.74
1992	10.35			33.86				0.33	2.29	2.86
1993	18.77			13.77				0.23	1.13	2.64
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	4.1			13.8				0.23	1.13	2.34
1st Q	8.9			31.4				0.31	1.81	2.63
Med.	15.1			40.5				0.38	2.21	2.75
3rd Q	20.4			46.6				0.47	2.62	3.00
Max.	38.6			66.1				0.54	3.07	3.22

Cod in 4X Alternate Methods or C.I.

	LS						Method 3					
	F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass Total (ages) (000 t)	Biomass Spawning (ages) (000 t)	F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass Total (ages) (000 t)	Biomass Spawning (ages) (000 t)
1948					65	54						
1949					77	58						
1950					84	66						
1951					75	62						
1952					70	58						
1953					74	62						
1954					76	62						
1955					71	60						
1956					80	58						
1957					62	45						
1958					62	45						
1959					67	48						
1960					71	46						
1961					87	65						
1962					90	69						
1963					93	67						
1964					112	77						
1965					113	83						
1966					113	95						
1967					105	90						
1968					96	82						
1969					89	73						
1970					81	62						
1971					76	60						
1972					72	56						
1973					79	57						
1974					76	56						
1975					80	58						
1976					87	67						
1977					92	72						
1978					100	77						
1979					104	74						
1980					105	82						
1981					102	80						
1982					92	72						
1983					78	68						
1984					70	59						
1985					62	51						
1986					58	46						
1987					65	42						
1988					77	53						
1989					80	58						
1990					88	75						
1991					85	68						
1992					76	58						
1993					70	52						
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Min.					58	42						
1st Q					71	56						
Med.					80	62						
3rd Q					92	72						
Max.					113	95						

Cod in 5Zj,m
May 94

YEAR	Catches (t)					TAC (t) by Canada	Assessment Results: ADAPT (illustrative)					
	Canadian			Foreign	TOTAL		F 3+	Expl. rate 3+ (%)	Recruits Age 1 (million)	Stock Size 3+ (million)	Biomass	
	Fixed	Mobile	Total								Total 1+ (000 t)	SSB 3+ (000 t)
1948												
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0	10 000	10 000							
1961			200	13 800	14 000							
1962			2 404	20 677	23 081							
1963			7 832	19 121	26 953							
1964			7 108	18 057	25 165							
1965			10 598	27 735	38 333							
1966			15 601	37 315	52 916							
1967			8 232	28 102	36 334							
1968			9 122	31 754	40 876							
1969			5 997	29 394	35 391							
1970			2 583	21 183	23 766							
1971			2 979	22 763	25 742							
1972			2 540	20 282	22 822							
1973			3 220	22 510	25 730	35 000						
1974			1 374	23 417	24 791	35 000						
1975			1 847	21 361	23 208	35 000						
1976			2 320	16 592	18 912	35 000						
1977			6 173	19 580	25 753							
1978	1 016	7 762	8 778	5 502	14 280		0.45	0.33	11	16	45	37
1979	1 341	4 637	5 978	6 408	12 386	35 000	0.40	0.30	9	10	50	34
1980	2 658	5 405	8 063	6 418	14 481	35 000	0.34	0.26	9	12	55	39
1981	4 539	3 960	8 499	8 094	16 593	35 000	0.39	0.29	17	13	61	41
1982	5 487	12 337	17 824	8 565	26 389	35 000	0.58	0.40	6	13	61	41
1983	5 227	6 903	12 130	8 572	20 702	45 000	0.57	0.40	5	15	50	40
1984	5 027	736	5 763	10 551	16 314	45 000	0.47	0.34	14	10	50	31
1985	2 887	7 556	10 443	6 641	17 084	25 000	0.62	0.42	5	8	44	27
1986	2 302	6 109	8 411	5 696	14 107	11 000	0.50	0.36	22	10	49	28
1987	4 237	7 608	11 845	4 792	16 637	12 500	0.44	0.32	7	8	51	26
1988	5 312	7 620	12 932	7 645	20 577	12 500	0.53	0.38	14	15	53	39
1989	6 014	1 987	8 001	6 182	14 183	8 000	0.36	0.28	4	12	50	33
1990	6 456	7 854	14 310	6 378	20 688	0	0.51	0.37	5	15	51	43
1991	6 757	6 698	13 455	6 549	20 004	15 000	0.75	0.48	11	7	49	33
1992	6 074	5 638	11 712	5 080	16 792	15 000	0.69	0.46	3	8	38	22
1993	3 629	4 890	8 519	4 019	12 538	15 000	0.64	0.43	2	5	26	21
1994			0			10 000					17	15
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					10 000		0.34	0.26	2	5	17	15
1st quart.					16 384		0.43	0.32	5	8	45	27
MEDIAN					20 695		0.51	0.36	6	11	50	33
3rd quart.					25 739		0.59	0.41	12	13	51	39
Maximum					52 916		0.75	0.48	22	16	61	43

5Ze for 1960 to 1977

for former mgt unit 5Ze

Cod in 5Zj,m

	Abundance indices									
	U.S.A. spring (nb/tow)			U.S.A. fall (nb/tow)			Cda RV (nb/tow)			
YEAR	Estimate 1+	Lower limit	Upper limit	Estimate 1+	Lower limit	Upper limit	Estimate 1+	CPUE OT t/hr	CPUE LL	Mean weight at age 4 (kg)
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978	10.000			8.660						3.47
1979	7.860			9.320						4.21
1980	9.970			9.780						3.67
1981	8.530			4.490						3.42
1982				9.270						3.83
1983	14.120			2.600						3.31
1984	3.660			3.010						3.62
1985	10.970			5.860						3.89
1986	6.370			4.790			21.65			3.66
1987	4.290			5.900			9.04	0.761	0.561	4.19
1988	7.670			2.480			18.52	0.494	0.689	3.51
1989	5.750			4.420			13.14	0.497	0.561	3.77
1990	6.780			4.000			28.71	0.380	0.685	3.52
1991	6.620			3.980			17.61	0.267	0.582	3.42
1992	3.220			0.730			11.98	0.444	0.523	3.84
1993	4.190			2.050			10.10	0.220	0.335	3.08
1994				0.820			9.31			
1995										
1996										
1997										
1998										
1999										
2000										
Min.	3.2			0.7			9.0	0.2	0.3	3.08
1st Q	5.0			2.6			10.1	0.3	0.5	3.46
Med.	6.8			4.4			13.1	0.4	0.6	3.64
3rd Q	9.3			5.9			18.5	0.5	0.6	3.83
Max.	14.1			9.8			28.7	0.8	0.7	4.21

COD

July 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 82-90; annual thereafter					
	Canadian			Foreign	TOTAL		F	Expl. rate	ecruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7 to 9	7 to 9 (%)	Age 3 million)	3+ million)	Total 3+ (000 t)	Spawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959					637 580							
1960			338 913	523 935	862 848							
1961			297 937	644 085	942 022							
1962			316 585	558 768	875 353							
1963			342 734	595 463	938 197							
1964			313 011	734 461	1 047 472							
1965			312 587	785 292	1 097 879							
1966			307 430	799 402	1 106 832							
1967			284 790	963 187	1 247 977							
1968			322 178	1 152 385	1 474 563							
1969			293 123	977 526	1 270 649							
1970			256 793	774 384	1 031 177							
1971			237 606	681 914	919 520							
1972			220 042	698 669	918 711							
1973			177 247	557 764	735 011	935 000						
1974			157 269	575 365	732 634	1 056 000						
1975			154 206	425 698	579 904	924 400						
1976			192 693	287 465	480 158	614 500						
1977			234 796	181 250	416 046	352 000						
1978			290 960	113 176	404 136	342 500						
1979			369 921	116 099	486 020	483 500						
1980			418 176	89 680	507 856	485 000						
1981			432 349	96 362	528 711	515 800						
1982			510 728	101 372	612 100	607 300						
1983			507 277	85 854	593 131	657 400						
1984			471 721	102 694	574 415	668 900						
1985			473 609	118 924	592 533	661 970						
1986			451 874	166 479	618 353	616 070						
1987			451 708	101 848	553 556	571 470						
1988			467 759	77 408	545 167	566 900						
1989			425 641	118 933	544 574	509 140						
1990			385 805	111 069	496 874	448 962						
1991			304 305	105 629	409 934	441 165						
1992			191 660	47 199	238 859	246 165						
1993			81 183	23 426	104 609	117 965						
1994						43 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			81 183	23 426	104 609	43 000						
1st quart.			242 403	103 428	518 284	443 114						
MEDIAN			312 799	234 358	612 100	541 350						
3rd quart.			423 775	672 457	928 859	647 068						
Maximum			510 728	1 152 385	1 474 563	1 056 000						

Haddock in 3LNO
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0		0							
1949			0		0							
1950			0		0							
1951			0		0							
1952			0		0							
1953			8 221	304	8 525							
1954			5 760	19 907	25 667							
1955			3 205	41 109	44 314							
1956			23 219	27 199	50 418							
1957			30 332	28 046	58 378							
1958			23 037	16 933	39 970							
1959			20 604	7 675	28 279							
1960			16 983	45 159	62 142							
1961			29 366	47 057	76 423							
1962			27 653	5 680	33 333							
1963			8 563	3 676	12 239							
1964			5 779	2 868	8 647							
1965			2 244	4 103	6 347							
1966			1 070	6 208	7 278							
1967			441	8 417	8 858							
1968			281	3 450	3 731							
1969			512	1 215	1 727							
1970			354	2 279	2 633							
1971			256	3 151	3 407							
1972			169	2 265	2 434							
1973			69	1 074	1 143							
1974			27	1 417	1 444							
1975			15	1 283	1 298							
1976			52	86	138							
1977			73	64	137							
1978			378	106	484							
1979			554	301	855							
1980			173	5	178							
1981			115	9	124							
1982			875	94	969							
1983			215	337	552							
1984			1 469	1 382	2 851							
1985			3 294	719	4 013							
1986			6 743	596	7 339							
1987			4 388	1 272	5 660	4 100						
1988			7 746	501	8 247	8 100						
1989			6 290	410	6 700	8 100						
1990			3 052	121	3 173	10 000						
1991			1 105	163	1 268	4 100						
1992			827	167	994	4 100						
1993			854		854	500						
1994			0		0	500						
1995			0		0							
1996			0		0							
1997			0		0							
1998			0		0							
1999			0		0							
2000			0		0							
Minimum					0							
1st quart.					137							
MEDIAN					1 727							
3rd quart.					8 247							
Maximum					76 423							

Haddock in 3LNO

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV Numbers (000s)			RV Biomass (t)			CPUE (units)			
	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973	306	-182	794	459	-67	985				
1974										
1975	379	-649	1 406	631	-4 590	5 853				
1976	1 387	191	2 583	438	-3 691	4 568				
1977	325	107	545	215	-139	569				
1978	4 587	-2 913	12 087	4 079	-4 085	12 242				
1979	1 533	-801	3 867	913	308	1 519				
1980	745	382	1 108	1 401	684	2 117				
1981	430	780	1 640	64	-470	598				
1982	79 888	-96 991	256 767	11 882	-11 049	34 813				
1983										
1984	104 284	50 376	158 194	54 873	29 281	80 465				
1985	18 512	-63 570	100 594	12 244	-41 893	66 382				
1986	24 017	-142 558	190 593	15 901	-86 984	118 786				
1987	21 123	-6 297	48 542	21 240	-12 458	54 939				
1988	33 407	-16 108	82 922	41 692	-19 965	103 349				
1989	1 871	798	2 946	2 859	204	5 513				
1990	7 190	-9 342	23 722	11 603	-15 403	38 609				
1991	4 830	-1 726	11 386	2 836	-11 627	17 299				
1992	1 395	-1 355	4 145	990	-734	2 714				
1993	2 530	-16 630	21 689	2 704	1 650	3 757				
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	306			64						
1st Q	1 066			772						
Med.	2 530			2 836						
3rd Q	19 818			12 063						
Max.	104 284			54 873						

Haddock in 3Ps

May 94

YEAR	Catches (t)					Canadian Quota (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			2 000	2 000	4 000							
1961			1 000	2 000	3 000							
1962			702	777	1 479							
1963			578	1 278	1 856							
1964			904	1 192	2 096							
1965			370	1 058	1 428							
1966			547	1 452	1 999							
1967			1 257	1 105	2 362							
1968			1 066	1 700	2 766							
1969			1 986	1 513	3 499							
1970			2 175	2 158	4 333							
1971			922	555	1 477							
1972			428	473	901							
1973			366	284	650							
1974			203	185	388							
1975			146	1	147							
1976			219	26	245							
1977			768	25	793							
1978			600	3	603							
1979			224	27	251							
1980			246	202	448							
1981			235	210	445							
1982			200	109	309							
1983			146	327	473							
1984			909	1 839	2 748							
1985			2 226	5 272	7 498							
1986			1 600	3 813	5 413							
1987			673	2 014	2 687	150						
1988			1 761	626	2 387	2 200						
1989			2 507	413	2 920	3 200						
1990			1 508	0	1 508	3 200						
1991			512	0	512	3 200						
1992			453	0	453	3 200						
1993			142	0	142	500						
1994			0	0	0	500						
1995			0	0	0							
1996			0	0	0							
1997			0	0	0							
1998			0	0	0							
1999			0	0	0							
2000			0	0	0							
Minimum					0							
1st quart.					251							
MEDIAN					793							
3rd quart.					2 387							
Maximum					7 498							

Haddock in 3Ps

YEAR	Abundance indices									
	RV Numbers (000s)			RV Biomass (t)			CPUE (units)			Mean weight at age 7 (kg)
	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972	2 442	740	4 144	2 886	457	5 315				
1973	1 759	-271	3 789	683	328	1 037				
1974	659	367	950	866	509	1 224				
1975	478	129	826	666	308	1 023				
1976	691	219	1 164	937	250	1 625				
1977	1 551	-152	3 255	1 996	-731	4 723				
1978	214	-109	537	118	18	217				
1979	554	-945	2 052	770	-2 395	3 935				
1980	359	105	613	829	169	1 488				
1981	342	-56	741	472	-53	997				
1982	14 602	1 053	28 150	1 570	694	2 445				
1983	6 684	-293	13 661	2 345	-584	5 275				
1984	7 659	-131	16 626	6 442	-607	12 490				
1985	30 328	5 356	55 299	32 349	5 484	59 214				
1986	18 471	-105 675	142 618	18 309	-68 879	105 498				
1987	5 724	-816	12 263	10 092	-2 836	23 021				
1988	3 634	826	6 442	5 241	3 520	6 963				
1989	7 269	-6 165	20 702	5 752	-2 995	14 500				
1990	1 181	352	2 011	3 157	-33	6 347				
1991	1 419	-2 767	5 605	588	-2 647	3 823				
1992	744	-722	2 211	1 045	-5 129	7 219				
1993	387	125	650	793	432	1 154				
1994	2 565	-27 661	32 791	3 070	-29 502	35 641				
1995										
1996										
1997										
1998										
1999										
2000										
Min.	214			118						
1st Q	607			782						
Med.	1 551			1 570						
3rd Q	6 204			4 199						
Max.	30 328			32 349						

Haddock in 4TVW

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results:				From RV index	
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass Index	
	Fixed	Mobile	Total								Total (ages) (000 t)	Adult (ages) (000 t)
1948												
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0		28 334							
1955			0		22 111							
1956			0		29 557							
1957			0		30 111							
1958			0		26 928							
1959			0		37 920							
1960			23 000	6 837	29 837							
1961			24 000	4 963	28 963							
1962			17 898	8 068	25 966							
1963			13 276	13 296	26 572							
1964			11 445	11 849	23 294							
1965			8 610	46 908	55 518							
1966			10 064	13 585	23 649							
1967			8 281	2 631	10 912							
1968			9 647	3 671	13 318							
1969			9 241	2 079	11 320							
1970			5 769	3 660	9 429							
1971			9 539	3 930	13 469							
1972			2 879	1 869	4 748	4 000						
1973			3 349	1 065	4 414	4 000						
1974			1 215	1 142	2 357	0						
1975			1 567	301	1 868	0						
1976			1 290	70	1 360	2 000						
1977			3 178	70	3 248	2 000						
1978			5 509	392	5 901	2 000						
1979			3 183	250	3 433	2 000						
1980			14 477	363	14 840	15 000						
1981			19 599	410	20 009	23 000						
1982			15 054	172	15 226	23 000						
1983			9 050	362	9 412	19 000						
1984			7 486	535	8 021	15 000						
1985			10 751	913	11 664	15 000						
1986			15 979	942	16 921	17 000						
1987			3 065	812	3 877	0						
1988			3 740	800	4 540	0						
1989			7 024	2 104	9 128	6 700						
1990			6 647	362	7 009	6 000						
1991			4 787	634	5 421	bycatch						
1992			5 935	178	6 113	bycatch						
1993			1 210		1 210	bycatch						
1994			0			bycatch						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					1 210							
1st quart.					5 253							
MEDIAN					11 492							
3rd quart.					24 228							
Maximum					55 518							

Haddock in 4TVW

	Abundance indices									
YEAR	RV (#/tow) - July			RV (#/tow) - March			CPUE (units)			Mean weight at age 7 (kg)
	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	8.87									
1971	8.00									
1972	4.41									
1973	3.36									
1974	6.16									
1975	9.40									
1976	7.89									
1977	25.82									
1978	37.74									
1979	28.91			15.99						
1980	37.74									
1981	52.47			31.07						
1982	62.51			84.58						
1983	85.49			100.07						
1984	67.08									
1985	44.46									
1986	50.49			76.94						
1987	30.89			66.57						
1988	56.15			49.40						
1989	41.52			69.36						
1990	42.42			51.36						
1991	63.01			20.89						
1992	28.61			9.48						
1993	27.71			18.22						
1994				38.66						
1995										
1996										
1997										
1998										
1999										
2000										
Min.	3.4			9.5						
1st Q	9.3			20.9						
Med.	34.3			49.4						
3rd Q	51.0			69.4						
Max.	85.5			100.1						

Haddock in 4X
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Real females (000 t)	Smoothed females (000 t)
1948					18 500							
1949			0		16 800							
1950			0		18 800							
1951			0		20 500							
1952			0		20 200							
1953			0		16 200							
1954			0		20 800							
1955			0		19 600							
1956			0		20 900							
1957			0		12 600							
1958			0		21 300							
1959			0		14 800							
1960			7 946	8 315	16 261							
1961			8 556	9 306	17 862							
1962			11 537	6 388	17 925							
1963			16 763	7 651	24 414							
1964			26 343	9 636	35 979							
1965			22 740	6 267	29 007							
1966			29 543	12 681	42 224							
1967			32 012	5 295	37 307							
1968			28 837	3 645	32 482							
1969			28 074	2 339	30 413							
1970	4 165	11 395	15 560	2 022	17 582						15	
1971	4 068	12 000	16 068	1 099	17 167						18	14
1972	4 898	7 492	12 390	890	13 280	9 000					9	12
1973	6 484	6 050	12 534	419	12 953	9 000					9	12
1974	6 670	5 571	12 241	792	13 033	0					17	13
1975	5 490	10 493	15 983	2 159	18 142	15 000					13	15
1976	5 802	10 491	16 293	1 072	17 365	15 000					14	26
1977	5 030	14 521	19 551	1 662	21 213	15 000					50	27
1978	7 995	17 415	25 410	1 164	26 574	21 500					17	31
1979	5 784	18 756	24 540	88	24 628	26 000					28	28
1980	8 120	20 159	28 279	332	28 611	28 000					39	30
1981	8 909	21 357	30 266	481	30 747	27 850					23	28
1982	8 558	14 670	23 228	858	24 086	32 000					22	20
1983	9 302	15 142	24 444	518	24 962	32 000					16	19
1984	6 962	12 460	19 422	206	19 628	32 000					20	20
1985	4 503	10 399	14 902	26	14 928	15 000					23	20
1986	5 576	9 410	14 986	48	15 034	15 000					17	17
1987	5 085	8 453	13 538	17	13 555	15 000					9	12
1988	3 471	7 450	10 921	55	10 976	12 400					10	9
1989	2 921	3 745	6 666	34	6 700	4 600					6	10
1990	4 012	3 285	7 297	52	7 349	4 600					14	15
1991	5 392	4 244	9 636	41	9 677	bycatch					24	17
1992	6 719	3 610	10 329	17	10 346	bycatch					13	14
1993	4 180	2 631	6 811	21	6 832	6 000					5	
1994			0			4 500						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					6 700						5	9
1st quart.					14 832						12	13
MEDIAN					18 321						16	17
3rd quart.					24 332						22	24
Maximum					42 224						50	31

Haddock in 4X

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV (Nb/tow)			CPUE			RV (kg/tow)			
	Estimate 1+	Recruit Index 1+2		LL t/1000 hooks	OTB-2 t/h		<43 cm	>43 cm	Total	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969		0.91								
1970	25.660	0.02					3.708	23.180	27.540	
1971	30.580	1.30					5.432	27.371	33.010	
1972	15.180	1.50					2.399	12.408	15.500	
1973	35.650	0.92					6.992	13.553	21.070	
1974	74.420	0.72					25.281	20.548	45.640	
1975	26.920	1.90					5.460	19.339	25.560	
1976	28.560	0.67					4.445	22.178	26.380	
1977	110.780	1.06					31.783	71.251	110.220	
1978	33.980	0.46					8.116	23.934	33.070	
1979	46.150	2.77					8.318	41.307	51.790	
1980	74.060	3.80					12.412	56.542	68.530	
1981	91.440	1.08					17.614	32.793	53.680	
1982	71.930	1.43					13.122	31.682	47.980	
1983	39.950	0.63					8.798	23.004	30.900	
1984	70.580	0.84					19.533	27.107	47.240	
1985	73.300	0.30		0.272	0.291		21.496	32.237	53.290	
1986	52.080	0.15		0.229	0.219		14.606	24.778	39.880	
1987	20.010	0.90		0.258	0.206		4.880	14.120	19.900	
1988	22.950	0.83		0.235	0.199		3.882	15.171	19.570	
1989	24.010	0.03		0.204	0.187		5.302	9.224	15.100	
1990	29.460	0.39		0.215	0.180		8.762	18.964	29.500	
1991	39.330			0.220	0.340		7.263	36.123	44.760	
1992	21.960			0.244	0.408		3.059	20.538	23.630	
1993	11.910			0.267			1.810	7.560	9.140	
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	11.9	0.0		0.20	0.18		1.81	7.56	9.14	
1st Q	25.2	0.5		0.22	0.20		4.77	18.02	22.99	
Med.	34.8	0.9		0.24	0.21		7.69	23.09	31.96	
3rd Q	70.9	1.2		0.26	0.30		13.49	31.82	47.43	
Max.	110.8	3.8		0.27	0.41		31.78	71.25	110.22	

Haddock in 5Zj,m
May 94

YEAR	Catches (t)					Canadian Quota (t)	Assessment Results: ADAPT					
	USA		Canada	Foreign w USA	TOTAL		F 4+	Expl. rate 4+ (%)	Recruits Age 1 (million)	Stock Size (ages) (million)	Biomass	
	Discard	Reported									Total (ages) (000 t)	SSB 3+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			77	40 785	40 862							
1961			133	46 350	46 483							
1962			3 461	50 512	53 973							
1963			8 379	46 443	54 822							
1964			11 625	52 461	64 086							
1965			14 889	135 473	150 362							
1966			18 292	102 982	121 274							
1967			13 040	38 429	51 469							
1968			9 292	30 926	40 218							
1969		6 622	3 941	7 317	11 258		0.61	0.41	0.8			22.5
1970		3 153	1 970	3 510	5 480		0.55	0.35	3.7			12.4
1971		3 534	1 610	4 304	5 914		1.09	0.53	0.2			7.8
1972		1 551	609	2 053	2 662	6 000	0.99	0.37	5.0			4.0
1973		1 396	1 565	1 792	3 357	6 000	0.43	0.44	11.0			2.2
1974	760	955	462	1 528	1 990		0.23	0.15	2.8			3.2
1975		1 705	1 353	1 734	3 087		0.55	0.22	3.4			8.6
1976		973	1 355	997	2 352	6 000	0.19	0.28	54.0			8.2
1977	3 874	2 429	2 871	2 429	5 300	6 000	0.31	0.21	6.3			8.9
1978	1 577	4 724	9 968	4 724	14 692		0.39	0.19	4.1			42.6
1979		5 211	5 080	5 211	10 291		0.44	0.30	40.6			35.1
1980	9 404	5 615	10 017	5 615	15 632	32 500	0.39	0.24	6.2			27.3
1981		9 077	5 658	9 077	14 735	32 500	0.35	0.25	4.4			40.0
1982		6 280	4 872	6 280	11 152	32 500	0.33	0.28	2.1			32.3
1983		4 454	3 208	4 454	7 662	28 [illegible]	0.40	0.29	2.4			25.0
1984		5 121	1 463	5 121	6 584	20 000	0.67	0.34	15.4			17.9
1985		1 683	3 484	1 683	5 167	10 000	0.40	0.26	1.5			11.0
1986		2 200	3 415	2 200	5 615	5 100	0.41	0.26	13.0			17.1
1987		1 418	4 703	1 418	6 121	8 300	0.52	0.32	1.1			13.8
1988		1 693	4 046	1 693	5 739	8 300	0.53	0.34	14.0			15.6
1989		787	3 059	787	3 846	8 300	0.39	0.25	0.7			11.3
1990		1 189	3 339	1 189	4 528		0.41	0.34	2.2			17.8
1991		949	5 446	949	6 395	5 000	0.49	0.41	2.3			15.1
1992		1 629	4 061	1 629	5 690	5 000	0.86	0.67	5.9			10.7
1993		421	3 722	421	4 143	5 000	1.14		20.3			6.8
1994						3 000 e						7.7
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					1 990		0.19	0.15	0.2			2.2
1st quart.					5 200		0.39	0.25	2.2			8.3
MEDIAN					6 490		0.43	0.30	4.1			13.1
3rd quart.					34 072		0.55	0.36	11.0			21.4
Maximum					150 362		1.14	0.67	54.0			42.6

For former mgt unit

Haddock in 5Zj,m

	Abundance indices								
	RV (#)			RV (#) Age 2			CPUE and Effort		
YEAR	CAN Spring 3+	USA Spring 3+	USA Fall 3+	CAN Spring Age 2	USA Spring Age 2	USA Fall Age 2	LL	OT	Mean weight at age 5 (kg)
1948									
1949									
1950									
1951									
1952									
1953									
1954									
1955									
1956									
1957									
1958									
1959									
1960									
1961									
1962									
1963									
1964									
1965									
1966									
1967									
1968									
1969		21.50	34.26		0.07	0.20			1.68
1970		26.27	19.25		0.44	0.00			1.91
1971		6.06	27.75		1.55	13.54			2.14
1972		3.52	8.84		0.00	0.00			2.20
1973		4.97	2.64		14.22	5.40			2.30
1974		12.06	9.37		48.48	35.35			2.00
1975		21.31	5.74		1.19	0.44			2.00
1976		7.06	11.93		0.88	1.30			2.80
1977		9.59	9.59		57.02	260.86	1.19		2.50
1978		65.63	128.63		1.79	0.53	1.72		3.10
1979		37.90	67.04		1.00	1.15	2.10		2.40
1980		33.28	21.23		234.77	57.72	5.64		2.30
1981		90.77	42.64		5.48	4.54	3.44		2.40
1982		35.15	39.28		8.45	9.44	1.73		2.34
1983		14.92	47.79		1.75	0.00	2.07		2.20
1984		16.16	13.75		2.97	0.83	2.00		2.30
1985		20.58	11.63		17.75	7.51	1.86		2.17
1986	16.68	14.54	10.40	0.57	0.57	0.69	2.61		2.90
1987	12.98	8.19	9.94	6.41	8.88	10.82	3.19	0.31	2.25
1988	27.96	8.92	5.57	0.09	0.12	0.01	1.72	0.32	2.23
1989	10.26	10.55	26.79	9.53	11.05	5.68	1.88	0.47	2.22
1990	31.43	29.59	18.60	0.20	0.15	0.16	1.49	0.15	2.23
1991	35.01	13.03	14.35	4.63	4.97	2.22	2.02	0.16	2.00
1992	18.54	3.28	5.24	7.76	0.62	0.67	2.06	0.16	2.26
1993	8.19	5.83	3.19	3.33	2.29	1.93	1.90	0.09	2.13
1994	12.15	0.00	23.64	30.43	0.00	13.47			
1995									
1996									
1997									
1998									
1999									
2000									
Min.	8.2	0.0	2.6	0.1	0.0	0.0	1.19	0.09	1.68
1st Q	12.1	7.3	9.4	0.6	0.6	0.5	1.73	0.15	2.14
Med.	16.7	13.8	14.0	4.6	1.8	1.6	2.00	0.16	2.23
3rd Q	28.0	25.1	27.5	7.8	8.8	9.0	2.10	0.32	2.34
Max.	35.0	90.8	128.6	30.4	234.8	260.9	5.64	0.47	3.10

HADDOCK

May 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7 to 9	7 to 9 (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	Spawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			50 006	103 096	153 102							
1961			63 055	109 676	172 731							
1962			61 251	71 425	132 676							
1963			47 559	72 344	119 903							
1964			56 096	78 006	134 102							
1965			48 853	193 809	242 662							
1966			59 516	136 908	196 424							
1967			55 031	55 877	110 908							
1968			49 123	43 392	92 515							
1969			43 754	14 463	58 217							
1970			25 828	13 629	39 457							
1971			28 395	13 039	41 434							
1972			16 475	7 550	24 025	19 000						
1973			17 883	4 634	22 517	19 000						
1974			14 148	5 064	19 212	0						
1975			19 064	5 478	24 542	15 000						
1976			19 209	2 251	21 460	23 000						
1977			26 441	4 250	30 691	23 000						
1978			41 865	6 389	48 254	23 500						
1979			33 581	5 877	39 458	28 000						
1980			53 192	6 517	59 709	75 500						
1981			55 873	10 187	66 060	83 350						
1982			44 229	7 513	51 742	87 500						
1983			37 063	5 998	43 061	79 000						
1984			30 749	9 083	39 832	67 000						
1985			34 657	8 613	43 270	40 000						
1986			42 723	7 599	50 322	37 100						
1987			26 367	5 533	31 900	27 550						
1988			28 214	3 675	31 889	31 000						
1989			25 546	3 748	29 294	30 900						
1990			21 843	1 724	23 567	23 800						
1991			21 486	1 787	23 273	12 300						
1992			21 605	1 991	23 596	12 300						
1993			12 739	442	13 181	12 000						
1994						8 500						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			12 739	442	13 181	0						
1st quart.			22 769	4 742	25 730	17 000						
MEDIAN			34 119	7 532	42 248	23 800						
3rd quart.			49 056	36 160	65 901	38 550						
Maximum			63 055	193 809	242 662	87 500						

Pollock in 3Ps
May 94

YEAR	Catches (t)					Canadian Quota (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960												
1961												
1962												
1963												
1964												
1965												
1966												
1967			194	423	617							
1968			129	316	445							
1969			64	123	187							
1970			83	379	462							
1971			77	199	276							
1972			154	157	311							
1973			121	145	266							
1974			134	84	218							
1975			100	23	123							
1976			69	68	137							
1977			835	4	839							
1978			430	2	432							
1979			718	59	777							
1980			570	94	664							
1981			246	42	288							
1982			434	336	770							
1983			929	181	1 110							
1984			1 816	0	1 816							
1985			2 284	0	2 284							
1986			7 554	0	7 554							
1987			5 071	0	5 071	1 500						
1988			4 266	0	4 266	5 400						
1989			2 159	1 145	3 304	5 400						
1990			1 581	438	2 019	5 400						
1991			1 263	42	1 305	5 400						
1992			473	0	473	5 400						
1993			137	0	137	600						
1994						500						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					123							
1st quart.					282							
MEDIAN					617							
3rd quart.					1 561							
Maximum					7 554							

Pollock in 3Ps

YEAR	Abundance indices									
	RV Numbers (000s)			RV Biomass (t)			CPUE (units)			Mean weight at age 7 (kg)
	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977	146	30	261	342	-100	783				
1978	156	45	268	247	54	441				
1979	381	-334	1 095	782	-553	2 118				
1980	761	-6 493	8 015	1 667	-14 349	17 683				
1981	1 538	-4 445	7 521	4 112	-11 780	20 004				
1982	632	221	1 042	1 338	-730	3 405				
1983	450	157	742	1 149	222	2 075				
1984	453	-2	907	738	-2 064	3 540				
1985	2 931	-27 462	33 325	3 716	-33 094	40 526				
1986	1 556	655	2 456	2 692	1 536	3 848				
1987	4 004	-4 623	12 631	7 877	-6 878	22 631				
1988	1 241	709	1 772	2 302	206	4 397				
1989	1 161	734	1 587	2 324	1 575	3 073				
1990	423	177	668	885	384	1 387				
1991	204	107	301	355	99	611				
1992	544	-5 217	6 306	1 388	-14 005	16 781				
1993	78	-102	258	167	-226	561				
1994	112	53	171	244	-35	522				
1995										
1996										
1997										
1998										
1999										
2000										
Min.	78			167						
1st Q	248			451						
Med.	499			1 244						
3rd Q	1 221			2 319						
Max.	4 004			7 877						

Pollock in 4VWX+5
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT F	Expl. rate	Recruits	Stock Size	Biomass	
	Canada				TOTAL		7-9	7-9 (%)	Age 2 (million)	4+ (million)	Total 2+ (000 t)	SSB 4+ (000 t)
			Total	Foreign								
1948												
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			27 259	6 564	33 823							
1961			25 999	6 530	32 529							
1962			31 509	5 028	36 537							
1963			28 946	5 472	34 418							
1964			29 888	9 607	39 495							
1965			27 157	7 640	34 797							
1966			18 199	15 123	33 322							
1967			17 034	4 539	21 573							
1968			17 988	3 359	21 347							
1969			15 928	4 318	20 246							
1970			10 725	6 227	16 952							
1971			11 677	7 548	19 225							
1972			17 855	8 870	26 725							
1973			26 729	9 606	36 335	50 000						
1974			24 975	4 486	29 461	55 000	0.59	0.41	17	23	98	58
1975			26 543	3 575	30 118	55 000	0.85	0.53	26	31	105	72
1976			23 565	3 615	27 180	55 000	0.75	0.48	37	27	103	65
1977			24 653	929	25 582	30 000	0.82	0.51	46	31	120	66
1978			26 801	1 237	28 038	30 000	0.71	0.47	20	41	141	82
1979			29 967	1 515	31 482	30 000	0.34	0.26	5	56	131	110
1980			35 986	1 605	37 591	40 000	0.40	0.30	14	46	127	111
1981			40 270	1 381	41 651	54 000	0.63	0.43	76	29	149	95
1982			38 029	1 268	39 297	55 000	0.68	0.45	44	23	159	78
1983			32 749	1 839	34 588	45 000	0.55	0.39	34	58	166	111
1984			33 465	1 959	35 424	53 000	0.26	0.21	36	63	189	137
1985			43 300	496	43 796	42 400	0.65	0.44	26	63	205	159
1986			43 249	1 083	44 332	40 000	0.54	0.38	27	62	176	151
1987			45 330	767	46 097	43 000	0.55	0.39	32	55	163	133
1988			41 831	1 280	43 111	43 000	0.57	0.40	21	49	169	120
1989			41 112	1 882	42 994	43 000	0.65	0.44	28	48	149	115
1990			36 178	1 301	37 479	43 000	0.68	0.45	39	38	132	97
1991			37 798	1 674	39 472	43 000	0.95	0.56	28	36	119	88
1992			32 191	2 102	34 293	43 000	0.78	0.50	12	34	102	83
1993			21 105	0	21 105	21 000	0.51	0.37	5	30	85	77
1994			0			24 000				32	88	76
1995			0								86	63
1996			0								103	78
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					16 952		0.26	0.21	5	23	85	58
1st quart.					27 395		0.55	0.39	19	31	103	77
MEDIAN					34 356		0.64	0.43	28	38	131	88
3rd quart.					38 871		0.72	0.47	36	55	161	113
Maximum					46 097		0.95	0.56	76	63	205	159

4VWX+5Ze

For former mgt unit

Pollock in 4VWX+5

	Abundance indices								
	RV (#/tow) - July			RV (#/tow) - July			Catch rates		Mean weight at age 6 (kg)
YEAR	Estimate 1+	Lower limit	Upper limit	Estimate 4-10	Lower limit	Upper limit	ZIFF TC2 OT All ages	IOP OTB2 Ap-nov	
1948									
1949									
1950									
1951									
1952									
1953									
1954									
1955									
1956									
1957									
1958									
1959									
1960									
1961									
1962									
1963									
1964									
1965									
1966									
1967									
1968									
1969									
1970	3.174			0.900					
1971	1.638			0.297					
1972	0.860			0.823					
1973	4.118			3.238					
1974	2.087			1.097					4.09
1975	1.209			1.182					3.81
1976	3.367			3.108					3.71
1977	6.158			5.123					3.50
1978	2.595			2.424					3.90
1979	2.606			2.465					3.40
1980	13.650			11.211					3.46
1981	2.267			1.880					3.34
1982	4.433			1.417				1.950	4.18
1983	3.763			2.600				1.420	4.12
1984	5.816			5.038				2.050	3.84
1985	17.729			11.320				2.370	3.12
1986	6.101			4.783				1.750	3.29
1987	18.546			15.478			0.588	1.060	2.94
1988	9.621			8.972			0.395	1.150	3.21
1989	5.094			4.875			0.807	1.070	3.25
1990	29.065			11.656			0.559	1.100	2.95
1991	7.273			5.038			0.405	0.600	2.79
1992	5.473			3.800			0.349	0.790	3.33
1993	20.380			13.700			0.290	0.960	2.62
1994									
1995									
1996									
1997									
1998									
1999									
2000									
Min.	0.9			0.30			0.29	0.60	2.62
1st Q	2.6			1.76			0.37	1.04	3.19
Med.	4.8			3.52			0.41	1.13	3.37
3rd Q	7.9			6.09			0.57	1.80	3.82
Max.	29.1			15.48			0.81	2.37	4.18

POLLOCK
May 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7 to 9	7 to 9 (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	Spawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			27 259	6 564	33 823							
1961			25 999	6 530	32 529							
1962			31 509	5 028	36 537							
1963			28 946	5 472	34 418							
1964			29 888	9 607	39 495							
1965			27 157	7 640	34 797							
1966			18 199	15 123	33 322							
1967			17 228	4 962	22 190							
1968			18 117	3 675	21 792							
1969			15 992	4 441	20 433							
1970			10 808	6 606	17 414							
1971			11 754	7 747	19 501							
1972			18 009	9 027	27 036							
1973			26 850	9 751	36 601	50 000						
1974			25 109	4 570	29 679	55 000						
1975			26 643	3 598	30 241	55 000						
1976			23 634	3 683	27 317	55 000						
1977			25 488	933	26 421	30 000						
1978			27 231	1 239	28 470	30 000						
1979			30 685	1 574	32 259	30 000						
1980			36 556	1 699	38 255	40 000						
1981			40 516	1 423	41 939	54 000						
1982			38 463	1 604	40 067	55 000						
1983			33 678	2 020	35 698	45 000						
1984			35 281	1 959	37 240	53 000						
1985			45 584	496	46 080	42 400						
1986			50 803	1 083	51 886	40 000						
1987			50 401	767	51 168	44 500						
1988			46 097	1 280	47 377	48 400						
1989			43 271	3 027	46 298	48 400						
1990			37 759	1 739	39 498	48 400						
1991			39 061	1 716	40 777	48 400						
1992			32 664	2 102	34 766	48 400						
1993			21 242	0	21 242	21 600						
1994						24 500						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			10 808	0	17 414	21 600						
1st quart.			24 003	1 582	27 605	40 000						
MEDIAN			28 103	3 313	34 592	48 400						
3rd quart.			37 458	6 266	39 497	52 250						
Maximum			50 803	15 123	51 886	55 000						

Silver Hake in 4VWX

June 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0									
1961			0									
1962			0	8 854	8 854							
1963			0	123 028	123 028							
1964			0	81 147	81 147							
1965			5	50 014	50 019							
1966			0	10 323	10 323							
1967			0	2 483	2 483							
1968			1	3 519	3 520							
1969			0	46 574	46 574							
1970			0	169 045	169 045							
1971			0	128 642	128 642							
1972			0	114 048	114 048							
1973			0	299 530	299 530							
1974			11	95 734	95 745	100 000						
1975			101	116 293	116 394	120 000						
1976			26	97 158	97 184	100 000						
1977			10	37 085	37 095	70 000						
1978			26	48 375	48 401	70 000						
1979			13	51 738	51 751	70 000						
1980			104	44 421	44 525	90 000						
1981			6	44 593	44 599	80 000						
1982			38	60 169	60 207	80 000						
1983			15	35 822	35 837	80 000						
1984			10	74 256	74 266	100 000						
1985			2	75 478	75 480	100 000						
1986			9	82 679	82 688	100 000						
1987			13	61 692	61 705	100 000						
1988			9	74 365	74 374	120 000						
1989			337	87 652	87 989	135 000						
1990			10	70 279	70 289	135 000						
1991			58	67 841	67 899	100 000						
1992			4	31 791	31 795	105 000						
1993			73	29 157	29 230	75 000						
1994						30 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					2 483							
1st quart.					42 668							
MEDIAN					64 802							
3rd quart.					89 928							
Maximum					299 530							

Silver Hake in 4VWX

	Abundance indices									
	CDA-USSR juv. survey			RV Abund. (millions) - July			CPUE (t per hour)			Mean weight at age 7 (kg)
YEAR	Catch per tow	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948										
1949								Includes USSR-Cuba and observer data		
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970				280						
1971				105						
1972				173						
1973				439						
1974				331						
1975				88						
1976				157						
1977				66			2.686	1.686	3.686	
1978				88			2.033	1.321	2.745	
1979				350			2.354	1.420	3.288	
1980				235			1.713	1.037	2.389	
1981	579.0			335			1.985	1.191	2.779	
1982	808.0			673			4.717	2.789	6.645	
1983	232.2			296			2.306	1.382	3.230	
1984	43.4			530			4.132	2.442	5.822	
1985	284.8			416			3.225	1.931	4.519	
1986	198.0			751			5.909	2.409	9.409	
1987	102.0			490			4.841	1.991	7.691	
1988	204.8			277			3.837	1.571	6.103	
1989	131.5			281			5.342	2.262	8.422	
1990	187.4			304			2.671	1.145	4.197	
1991	78.6			210			2.397	1.023	3.771	
1992				169			2.059	0.871	3.247	
1993	186.5			363			1.404	0.556	2.252	
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	43.4			66			1.40	0.56	2.25	
1st Q	124.1			172			2.06	1.15	3.23	
Med.	192.7			288			2.67	1.42	3.77	
3rd Q	245.4			376			4.13	1.99	6.10	
Max.	808.0			751			5.91	2.79	9.41	

White Hake in 4T
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960	1 508	500	2 008		2 008							
1961	3 814	1 509	5 323		5 323							
1962	6 005	1 238	7 243		7 243							
1963	5 035	1 515	6 550		6 550							
1964	4 616	1 590	6 206		6 206							
1965			4 706		4 706							
1966	4 552	2 472	7 024		7 024							
1967	4 127	2 423	6 550		6 550							
1968	3 382	879	4 261		4 261							
1969	3 128	1 080	4 208		4 208							
1970	3 823	1 845	5 668		5 668							
1971	3 552	2 155	5 707		5 707							
1972	3 755	2 002	5 757		5 757							
1973	3 023	2 679	5 702		5 702							
1974	1 857	1 759	3 616		3 616							
1975	2 245	1 880	4 125		4 125							
1976	1 931	1 827	3 758		3 758							
1977	2 349	1 635	3 984		3 984							
1978	2 785	2 040	4 825		4 825							
1979	4 372	3 738	8 110		8 110							
1980	7 378	5 045	12 423		12 423							
1981	7 384	6 655	14 039		14 039							
1982	5 897	3 879	9 776		9 776	12 000						
1983	4 258	3 047	7 305		7 305	12 000						
1984	4 728	2 322	7 050		7 050	12 000						
1985	3 367	2 647	6 014		6 014	12 000						
1986	2 956	1 992	4 948		4 948	12 000						
1987	4 047	2 325	6 372		6 372	9 400						
1988	2 682	1 205	3 887		3 887	5 500						
1989	2 797	2 557	5 354		5 354	5 500						
1990	3 188	1 987	5 175		5 175	5 500						
1991	2 449	2 061	4 510		4 510	5 500						
1992	1 976	1 837	3 813		3 813	5 500						
1993	1 193	273	1 466		1 466	3 600						
1994						2 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					1 466							
1st quart.					4 221							
MEDIAN					5 511							
3rd quart.					6 550							
Maximum					14 039							

White Hake in 4T

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV (#/tow) in 4T			Survey 2 (units)			CPUE (units)			
	Prince All ages	Hammond	Needler	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971	3.20									
1972	1.90									
1973	6.80									
1974	12.50									
1975	9.80									
1976	8.60									
1977	5.40									
1978	11.40									
1979	9.80									
1980	8.50									
1981	14.20									
1982	4.70									
1983	4.20									
1984	8.30									
1985	9.00									
1986		16.50								
1987		9.20								
1988		12.40								
1989		12.80								
1990		10.20								
1991		9.50								
1992			7.40							
1993			3.70							
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	1.9	9.2	3.7							
1st Q	5.1	9.7	4.6							
Med.	8.5	11.3	5.6							
3rd Q	9.8	12.7	6.5							
Max.	14.2	16.5	7.4							

White Hake in 4VWX
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	Spawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			0		0							
1961			200		200							
1962			0		0							
1963			200		200							
1964			0		0							
1965			200		200							
1966			1 000		1 000							
1967			1 000		1 000							
1968			1 000		1 000							
1969			2 000		2 000							
1970			3 000		3 000							
1971			5 000		5 000							
1972			6 000		6 000							
1973			6 000		6 000							
1974			5 000		5 000							
1975			4 000		4 000							
1976			3 000		3 000							
1977			3 000		3 000							
1978			4 000		4 000							
1979			3 000		3 000							
1980			4 000		4 000							
1981			4 000		4 000							
1982			5 000		5 000							
1983			4 000		4 000							
1984			4 000		4 000							
1985			5 000		5 000							
1986			5 000		5 000							
1987			5 000		5 000							
1988			6 000		6 000							
1989			5 000		5 000							
1990			5 297	142	5 439							
1991			4 350	69	4 419							
1992			4 690	28	4 718							
1993												
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					0							
1st quart.					1 000							
MEDIAN					4 000							
3rd quart.					5 000							
Maximum					6 000							

TOTAL GADOIDS
May 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
	Canadian			Foreign	TOTAL		F 7 to 9	Expl. rate 7 to 9 (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass	
	Fixed	Mobile	Total								Total 3+ (000 t)	pawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			418 186	633 595	1 051 781							
1961			392 514	760 291	1 152 805							
1962			416 588	644 075	1 060 663							
1963			425 989	796 307	1 222 296							
1964			405 201	903 221	1 308 422							
1965			393 508	1 036 755	1 430 263							
1966			393 169	961 756	1 354 925							
1967			364 599	1 026 509	1 391 108							
1968			394 680	1 202 971	1 597 651							
1969			359 077	1 043 004	1 402 081							
1970			302 097	963 664	1 265 761							
1971			288 462	831 342	1 119 804							
1972			266 283	829 294	1 095 577							
1973			233 682	871 679	1 105 361	1 004 000						
1974			205 153	680 733	885 886	1 211 000						
1975			208 139	551 067	759 206	1 114 400						
1976			242 320	390 557	632 877	792 500						
1977			293 719	223 518	517 237	475 000						
1978			368 907	169 179	538 086	466 000						
1979			445 310	175 288	620 598	611 500						
1980			524 451	142 317	666 768	690 500						
1981			546 783	152 565	699 348	733 150						
1982			608 234	170 658	778 892	841 800						
1983			589 338	129 694	719 032	873 400						
1984			548 811	187 992	736 803	900 900						
1985			564 866	203 511	768 377	856 370						
1986			555 357	257 840	813 197	805 170						
1987			539 861	169 840	709 701	752 920						
1988			551 966	156 728	708 694	771 800						
1989			505 149	213 360	718 509	728 940						
1990			455 889	184 953	640 842	661 662						
1991			373 770	177 042	550 812	607 365						
1992			254 436	83 111	337 547	417 365						
1993			116 703	53 025	169 728	230 165						
1994						108 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			116 703	53 025	169 728	108 000						
1st quart.			295 814	171 816	674 913	608 399						
MEDIAN			394 094	324 199	773 635	743 035						
3rd quart.			519 626	830 830	1 144 555	852 728						
Maximum			608 234	1 202 971	1 597 651	1 211 000						

Redfish in 2+3K
May 94

	Catches (t)					TAC (t)	Assessment Results: ADAPT					
YEAR	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			1	129 999	130 000							
1961			0	55 000	55 000							
1962			0	19 657	19 657							
1963			1	23 643	23 644							
1964			13	50 141	50 154							
1965			266	43 273	43 539							
1966			54	32 676	32 730							
1967			29	26 133	26 162							
1968			183	18 715	18 898							
1969			6	24 600	24 606							
1970			63	21 734	21 797							
1971			153	19 153	19 306							
1972			49	19 984	20 033							
1973			374	38 591	38 965							
1974			153	29 992	30 145	30 000						
1975			445	25 114	25 559	30 000						
1976			3 894	22 071	25 965	30 000						
1977			3 498	14 041	17 539	30 000						
1978			22 052	7 094	29 146	30 000						
1979			26 587	4 143	30 730	30 000						
1980			7 785	6 734	14 519	35 000						
1981			13 416	4 226	17 642	35 000						
1982			11 134	6 849	17 983	35 000						
1983			9 297	6 014	15 311	35 000						
1984			17 367	6 322	23 689	35 000						
1985			21 579	7 646	29 225	35 000						
1986			18 793	8 226	27 019	35 000						
1987			12 148	6 363	18 511	35 000						
1988			5 360	1 582	6 942	35 000						
1989			2 179	988	3 167	35 000						
1990			2 048	373	2 421	35 000						
1991			170	69	239	20 000						
1992			9	6	15	20 000						
1993			2	0	2	20 000						
1994				0		1 000						
1995				0								
1996				0								
1997				0								
1998				0								
1999				0								
2000				0								
Minimum					2							
1st quart.					17 565							
MEDIAN					22 721							
3rd quart.					29 205							
Maximum					130 000							

Redfish in 2+3K

	Abundance indices									
	RV Biomass 2J			RV Biomass 3K			CPUE (units)			
YEAR	Biomass (t) (ages)	Lower limit	Upper limit	Biomass (t) (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Mean weight at age 7 (kg)
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978	254 278			470 721						
1979	126 484			182 658						
1980	137 742			405 461						
1981	282 841			206 661						
1982	71 603			148 970						
1983	97 088			658 226						
1984	64 161			96 637						
1985	23 290			128 909						
1986	56 954			97 445						
1987	24 351			33 711						
1988	65 435			101 272						
1989	6 355			33 234						
1990	11 661			88 358						
1991	1 810			12 235						
1992	2 369			1 135						
1993	1 180			686						
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	1 180			686						
1st Q	10 335			33 592						
Med.	60 556			99 359						
3rd Q	104 437			188 659						
Max.	282 841			658 226						

Redfish in 3LN
June 94

YEAR	Catches (t) - w surveillance estimates					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959					44 585							
1960			2 000	26 010	28 010							
1961			2 000	21 175	23 175							
1962			6 862	14 572	21 434							
1963			4 755	16 342	21 097							
1964			1 363	6 741	8 104							
1965			2 904	20 562	23 466							
1966			1 458	15 516	16 974							
1967			442	26 746	27 188							
1968			662	16 981	17 643							
1969			292	24 408	24 700							
1970			412	13 976	14 388							
1971			618	33 735	34 353							
1972			444	28 489	28 933							
1973			364	32 933	33 297							
1974			200	22 086	22 286	28 000						
1975			1 880	15 991	17 871	20 000						
1976			6 493	14 019	20 512	20 000						
1977			9 537	6 979	16 516	16 000						
1978			3 180	8 863	12 043	16 000						
1979			6 503	7 564	14 067	18 000						
1980			4 016	12 014	16 030	25 000						
1981			8 126	16 154	24 280	25 000						
1982			7 250	14 297	21 547	25 000						
1983			6 464	13 283	19 747	25 000						
1984			1 296	13 465	14 761	25 000						
1985			2 451	18 106	20 557	25 000						
1986			4 849	37 956	42 805	25 000						
1987			4 532	74 499	79 031	25 000						
1988			6 491	46 775	53 266	25 000						
1989			1 610	32 039	33 649	25 000						
1990			1 031	28 074	29 105	25 000						
1991			399	25 416	25 815	14 000						
1992			743	26 540	27 283	14 000						
1993			45	24 355	24 400	14 000						
1994						14 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					8 104							
1st quart.					17 757							
MEDIAN					23 175							
3rd quart.					28 472							
Maximum					79 031							

Redfish in 3LN

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV surveys in 3LN			CPUE (t/day)			CPUE (t/hour)			
	3L - CAN All ages	Russia trawl (Million)	Russia Total (Million)	3L All ages	3N All ages		3L All ages	3N All ages		
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957	Not									
1958	updated									
1959	for 1993			19.043	11.984		1.370	1.224		
1960	data			21.261	28.226		1.660	1.554		
1961				22.321	14.413		2.149	1.509		
1962				20.959	14.983		1.546	1.648		
1963				26.996	12.255		1.930	1.469		
1964				32.052	13.133		2.447	1.521		
1965				19.318	15.047		2.229	1.873		
1966				17.430	17.592		1.459	2.156		
1967				23.741			1.917	1.969		
1968				19.987	15.880		1.602	0.904		
1969				19.042	19.380		1.704	1.463		
1970				10.058	20.098		1.891	1.404		
1971				22.109	16.943		1.799	1.273		
1972				10.242	19.276		1.511	1.390		
1973				18.159	15.430		2.119	1.597		
1974				10.412	2.707		0.957	2.243		
1975				14.229	23.441		1.210	1.904		
1976				18.845	11.804		1.346	0.978		
1977				17.849	19.021		1.268	1.243		
1978	286			13.166	14.342		1.157	1.313		
1979	217			16.582	19.894		1.538	1.430		
1980	54		trawl+	17.359	21.791		1.360	1.957		
1981	247		acoustic	21.307	17.904		1.587	1.723		
1982				23.619	17.808		1.615	1.843		
1983		429		23.268	17.046		1.702	1.551		
1984	478	720		17.826	15.223		1.475	1.217		
1985	180	245		16.641	11.680		1.756	1.128		
1986	78	133		22.372	14.620		1.851	1.151		
1987		182		19.215	18.322		1.547	1.736		
1988		167	822	17.484	14.202		1.337	1.283		
1989		45	145	22.810	13.880		1.959	1.132		
1990	66	23	139	14.417	9.625		1.141	0.817		
1991	35	42	373	13.357	13.692		1.256	1.213		
1992	21			15.302	10.133		1.891	0.872		
1993		130	392	20.139	14.764		2.032	1.372		
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	21	23	139	10.06	2.71		0.96	0.82		
1st Q	57	66	145	16.61	13.74		1.37	1.22		
Med.	129	150	373	19.04	15.14		1.60	1.43		
3rd Q	240	229	392	21.71	18.22		1.89	1.69		
Max.	478	720	822	32.05	28.23		2.45	2.24		

Redfish in 3M
June 94

YEAR	Catches (t) - w surveillance estimates					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0	8 000	8 000							
1961			0	16 000	16 000							
1962			47	6 911	6 958							
1963			0	7 025	7 025							
1964			0	13 983	13 983							
1965			0	29 840	29 840							
1966			0	7 241	7 241							
1967			0	729	729							
1968			26	4 937	4 963							
1969			5	2 793	2 798							
1970			0	3 168	3 168							
1971			0	8 033	8 033							
1972			1	41 945	41 946							
1973			2	22 350	22 352							
1974			8	34 663	34 671	40 000						
1975			659	15 416	16 075	16 000						
1976			8 368	8 630	16 998	16 000						
1977			4 794	15 473	20 267	16 000						
1978			4 347	12 415	16 762	16 000						
1979			5 129	14 945	20 074	20 000						
1980			278	15 689	15 967	20 000						
1981			529	13 362	13 891	20 000						
1982			2	14 682	14 684	20 000						
1983			0	19 527	19 527	20 000						
1984			0	20 228	20 228	20 000						
1985			0	20 282	20 282	20 000						
1986			0	28 873	28 873	20 000						
1987			0	44 411	44 411	20 000						
1988			0	23 189	23 189	20 000						
1989			0	58 000	58 000	20 000						
1990			0	81 000	81 000	50 000						
1991			0	48 000	48 000	50 000						
1992			0	43 000	43 000	43 000						
1993			206	28 794	29 000	30 000						
1994			0			26 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					729							
1st quart.					9 498							
MEDIAN					18 263							
3rd quart.					28 968							
Maximum					81 000							

Redfish in 3M

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Russian RV (t)			EEC trawl RV (t)			CPUE			
	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate (t/hour) All ages	Estimate (t/day) All ages	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958	Not updated									
1959	with 1993						2.699	30.138		
1960	data						4.742	27.502		
1961							5.569	22.247		
1962							3.992	51.592		
1963							4.104	36.131		
1964							2.725	16.070		
1965							3.493	21.303		
1966							1.917	19.886		
1967							2.044	8.630		
1968							3.802	24.725		
1969							3.014	18.677		
1970							7.785	23.316		
1971							5.342	22.086		
1972							2.972	27.743		
1973							2.511	25.276		
1974							3.383	27.818		
1975							2.759	24.634		
1976							2.524	23.331		
1977							2.344	20.947		
1978							2.762	20.618		
1979							2.034	19.597		
1980							2.327	20.245		
1981							2.577	22.415		
1982							2.538	19.137		
1983	155 000						2.257	19.309		
1984	132 000						2.279	20.289		
1985	52 000						2.377	23.454		
1986	310 000						3.549	32.694		
1987	106 000						3.802	32.817		
1988	379 000			158 222			2.361	19.423		
1989	366 000			136 633			2.094	20.583		
1990	247 000			104 193			1.840	18.653		
1991	107 000			63 846			1.879	17.568		
1992	100 000			104 477			1.735	20.471		
1993							1.569	13.961		
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	52 000			63 846			1.57	8.63		
1st Q	106 250			104 193			2.27	19.51		
Med.	143 500			104 477			2.58	21.30		
3rd Q	294 250			136 633			3.52	25.00		
Max.	379 000			158 222			7.79	51.59		

Redfish in 3O
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			100	4 900	5 000							
1961			1 000	10 000	11 000							
1962			1 046	6 511	7 557							
1963			2 155	7 025	9 180							
1964			1 320	14 724	16 044							
1965			203	19 588	19 791							
1966			107	15 198	15 305							
1967			645	18 392	19 037							
1968			52	6 393	6 445							
1969			186	15 692	15 878							
1970			288	12 904	13 192							
1971			165	19 627	19 792							
1972			508	15 609	16 117							
1973			133	8 664	8 797							
1974			91	13 033	13 124	16 000						
1975			103	15 007	15 110	16 000						
1976			3 664	11 684	15 348	16 000						
1977			2 972	7 878	10 850	16 000						
1978			1 841	5 019	6 860	16 000						
1979			6 404	11 333	17 737	20 000						
1980			1 541	15 765	17 306	21 900						
1981			2 577	10 027	12 604	20 000						
1982			491	10 869	11 360	20 000						
1983			7	7 333	7 340	20 000						
1984			167	16 811	16 978	20 000						
1985			104	12 756	12 860	20 000						
1986			141	10 914	11 055	20 000						
1987			183	26 987	27 170	20 000						
1988			181	34 611	34 792	14 000						
1989			27	13 229	13 256	14 000						
1990			155	14 087	14 242	14 000						
1991			28	8 283	8 311	14 000						
1992			329	13 975	14 304	14 000						
1993			697	14 977	15 674	14 000						
1994					0	10 000						
1995					0							
1996					0							
1997					0							
1998					0							
1999					0							
2000					0							
Minimum					0							
1st quart.					7 340							
MEDIAN					12 860							
3rd quart.					15 878							
Maximum					34 792							

Redfish in 3O

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV Biomass			Survey 2 (units)			CPUE (units)			
	Biomass (t) (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959							1.960	2.826	3.692	
1960							1.499	3.335	5.171	
1961							1.935	3.489	5.043	
1962							1.961	3.001	4.041	
1963							2.196	3.284	4.372	
1964							2.084	3.680	5.276	
1965							1.416	2.688	3.960	
1966							1.059	3.297	5.535	
1967							2.533	4.123	5.713	
1968										
1969							1.460	2.270	3.080	
1970							1.741	2.649	3.557	
1971							2.364	3.400	4.436	
1972							1.776	2.450	3.124	
1973							2.138	3.216	4.294	
1974							1.429	2.179	2.929	
1975							1.174	1.988	2.802	
1976							2.362	3.108	3.854	
1977							2.171	2.897	3.623	
1978							1.866	2.472	3.078	
1979							3.120	4.072	5.024	
1980							2.675	3.465	4.255	
1981							2.818	3.702	4.586	
1982							3.031	3.911	4.791	
1983							2.549	3.455	4.361	
1984							2.529	3.293	4.057	
1985							2.454	3.282	4.110	
1986							2.222	3.034	3.846	
1987							2.610	3.332	4.054	
1991	8 082						2.532	3.244	3.956	
1991	15 649						2.024	2.662	3.300	
1992	6 759						1.994	2.626	3.258	
1992	26 256						2.241	3.539	4.837	
1993	42 008						1.547	2.269	2.991	
1993	37 305									
1994	72 000									
1995										
1996										
1997										
1998										
1999										
2000										
Min.	6 759						1.06			
1st Q	11 866						1.78			
Med.	26 256						2.14			
3rd Q	39 657						2.53			
Max.	72 000						3.12			

Redfish in Laurentian CHannel
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	SSB (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			7 222	16 065	23 287							
1961			10 981	7 712	18 693							
1962			12 158	9 189	21 347							
1963			14 111	8 179	22 290							
1964			14 760	8 432	23 192							
1965			17 617	4 233	21 850							
1966			24 482	3 910	28 392							
1967			20 572	21 598	42 170							
1968			12 187	7 982	20 169							
1969			12 689	33 587	46 276							
1970			17 334	32 073	49 407							
1971			21 197	37 003	58 200							
1972			18 052	26 878	44 930							
1973			20 998	10 829	31 827							
1974			18 146	15 892	34 038	25 000						
1975			27 422	11 049	38 471	25 000						
1976			20 592	3 117	23 709	18 000						
1977			26 940	1 810	28 750	18 000						
1978			25 850	698	26 548	18 000						
1979			18 475	296	18 771	16 000						
1980			16 801	328	17 129	18 000						
1981			21 156	595	21 751	18 000						
1982			16 889	136	17 025	18 000						
1983			13 389	84	13 473	18 000						
1984			6 777	1 364	8 141	18 000						
1985			10 354	1 140	11 494	18 000						
1986			9 220	1 545	10 765	18 000						
1987			12 564	1 392	13 956	18 000						
1988			10 047	681	10 728	15 000						
1989			14 651	735	15 386	15 000						
1990			14 016	776	14 792	10 000						
1991			22 325	1 215	23 540	15 000						
1992			17 059	231	17 290	25 000						
1993			27 098	0	27 098	28 000						
1994						25 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					8 141							
1st quart.					17 051							
MEDIAN					22 070							
3rd quart.					28 661							
Maximum					58 200							

For former mgt unit: 3P

Redfish in Laurentian CHannel

	Abundance indices							
	RV Wt/tow		RV No./tow		CPUE (units)			
YEAR	Wt/tow (kg) (ages)	April	No./tow (ages)	April	Estimate (ages)	Lower limit	Upper limit	Mean weight at age 7 (kg)
1948								
1949								
1950								
1951								
1952								
1953								
1954								
1955								
1956								
1957								
1958								
1959								
1960					0.464	0.692	0.578	
1961					0.467	0.667	0.567	
1962					0.594	0.830	0.712	
1963					0.584	0.788	0.686	
1964					0.607	0.827	0.717	
1965					0.784	1.060	0.922	
1966					0.866	1.102	0.984	
1967					0.866	1.098	0.982	
1968					0.755	0.963	0.859	
1969					0.755	0.943	0.849	
1970					0.696	0.852	0.774	
1971					0.632	0.772	0.702	
1972					0.574	0.698	0.636	
1973	108		385		0.564	0.684	0.624	
1974	87		304		0.459	0.555	0.507	
1975	137		987		0.470	0.566	0.518	
1976	151		747		0.394	0.486	0.440	
1977	77		417		0.434	0.526	0.480	
1978	97		433		0.453	0.545	0.499	
1979	72		245		0.382	0.466	0.424	
1980	164		965		0.423	0.519	0.471	
1981	49		1 407		0.402	0.498	0.450	
1982	39		421		0.500	0.620	0.560	
1983	40		340		0.531	0.671	0.601	
1984	21		60		0.448	0.588	0.518	
1985	47		183		0.436	0.536	0.486	
1986	54		205		0.420	0.520	0.470	
1987	65		237		0.422	0.526	0.474	
1988	161		331		0.426	0.530	0.478	
1989	98		239		0.652	0.832	0.742	
1990	77		205		0.936	1.224	1.080	
1991	117		651		0.789	1.025	0.907	
1992	50		176		0.702	0.918	0.810	
1993	51	62	157	325	0.564	1.052	0.808	
1994		49		199				
1995								
1996								
1997								
1998								
1999								
2000								
Min.	21	49	60	199	0.38			
1st Q	50	52	205	230	0.44			
Med.	77	56	331	262	0.55			
3rd Q	108	59	433	294	0.69			
Max.	164	62	1 407	325	0.94			

Gulf Redfish
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	SSB (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953			8 366	0	8 366							
1954			15 540	17 228	32 768							
1955			15 118	34 739	49 857							
1956			22 009	24 825	46 834							
1957			16 792	17 539	34 331							
1958			15 206	7 364	22 570							
1959			11900	5 213	17 113							
1960			11523	1 307	12 830							
1961			10843	219	11 062							
1962			7084	67	7 151							
1963			15938	4 879	20 817							
1964			18158	12 366	30 524							
1965			35725	17 104	52 829							
1966			55196	12 766	67 962							
1967			55936	15 975	71 911							
1968			77761	17 503	95 264							
1969			79197	13 123	92 320							
1970			82647	7 856	90 503							
1971			77433	4 756	82 189							
1972			81130	1 460	82 590							
1973			131962	4 139	136 101							
1974			64754	2 327	67 081							
1975			68701	1 351	70 052							
1976			43510	868	44 378	30 000						
1977			16648	424	17 072	18 000						
1978			14802	132	14 934	18 000						
1979			16217	208	16 425	16 000						
1980			15462	77	15 539	16 000						
1981			22014	31	22 045	20 000						
1982			26719	12	26 731	31 000						
1983			24928	46	24 974	33 000						
1984			25512	9	25 521	50 600						
1985			35068	9	35 077	50 600						
1986			36406	8	36 414	55 600						
1987			43424	22	43 446	55 600						
1988			51892		51 892	56 000						
1989			52482		52 482	57 000						
1990			61934		61 934	57 000						
1991			59508		59 508	57 000						
1992			77384		77 384	67 000						
1993			51091		51 091	60 000						
1994						30 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					7 151							
1st quart.					22 045							
MEDIAN					43 446							
3rd quart.					67 081							
Maximum					136 101							

For former mgt unit: 4RST

Gulf Redfish

YEAR	Abundance indices									Mean weight at age 7 (kg)
	GADUS (t)			A.Needler (t)			OTB+OTM CPUE (t/h)			
	Estimate All ages	Lower limit 95 % CI	Upper	Estimate All ages	Lower limit 95 % CI	Upper limit	Estimate All ages	Lower limit -2SE	Upper limit +2SE	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959							1.244	0.856	1.632	
1960							1.071	0.771	1.371	
1961							0.932	0.660	1.204	
1962							0.907	0.629	1.185	
1963							1.486	1.130	1.842	
1964							1.658	1.204	2.112	
1965							1.641	1.227	2.055	
1966							1.937	1.501	2.373	
1967							2.236	1.708	2.764	
1968							2.485	1.919	3.051	
1969							1.875	1.479	2.271	
1970							1.531	1.223	1.839	
1971							1.525	1.219	1.831	
1972							1.550	1.226	1.874	
1973							1.145	0.905	1.385	
1974							1.060	0.816	1.304	
1975							1.073	0.893	1.253	
1976							0.816	0.660	0.972	
1977							0.840	0.664	1.016	
1978	112 013	72 637	151 389				0.999	0.779	1.219	
1979	211 396	80 748	342 044				1.216	0.932	1.500	
1980	76 671	38 311	115 032				1.691	1.289	2.093	
1981	102 304	18 966	185 642				1.636	1.336	1.936	
1982							1.655	1.365	1.945	
1983	111 473	72 599	150 347		Hammond		1.152	0.934	1.370	
1984	131 822	32 856	230 787	426 104	332 469	519 739	1.385	1.131	1.639	
1985	146 016	77 871	214 160	368 606	257 116	480 097	1.228	1.032	1.424	
1986	142 195	86 025	198 365	344 795	281 089	408 501	1.221	1.029	1.413	
1987	27 141	14 899	39 383	452 444	207 707	701 769	1.080	0.924	1.236	
1988	43 822	19 812	67 832	528 969	422 836	636 901	1.452	1.236	1.668	
1989	72 534	0	201 679	493 454	344 091	642 817	1.778	1.506	2.050	
1990	32 273	19 501	47 045	379 144	163 385	576 332	2.875	2.407	3.343	
1991	37 969	26 639	42 298	222 546	149 927	295 165	2.294	1.940	2.648	
1992	61 629	34 420	88 839	177 284	60 743	293 825	2.746	2.324	3.168	
1993	66 406	0	139 937	95 341	0	268 436	1.702	1.422	1.982	
1994	27 213	9 389	45 038							
1995										
1996										
1997										
1998										
1999										
2000										
Min.	27 141	0	39 383	95 341	0	268 436	0.82			
1st Q	42 359	17 949	62 635	253 108	153 292	323 499	1.11			
Med.	74 603	29 748	145 142	373 875	232 412	499 918	1.49			
3rd Q	116 965	72 609	199 194	445 859	319 619	621 759	1.70			
Max.	211 396	86 025	342 044	528 969	422 836	701 769	2.88			

Gulf Redfish

YEAR	Abundance indices									Mean weight at age 7 (kg)
	GADUS (t)			A.Needler (t)			OTB+OTM CPUE (t/h)			
	Estimate All ages	Lower limit 95 % CI	Upper	Estimate All ages	Lower limit 95 % CI	Upper limit	Estimate All ages	Lower limit -2SE	Upper limit +2SE	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959							1.244	0.856	1.632	
1960							1.071	0.771	1.371	
1961							0.932	0.660	1.204	
1962							0.907	0.629	1.185	
1963							1.486	1.130	1.842	
1964							1.658	1.204	2.112	
1965							1.641	1.227	2.055	
1966							1.937	1.501	2.373	
1967							2.236	1.708	2.764	
1968							2.485	1.919	3.051	
1969							1.875	1.479	2.271	
1970							1.531	1.223	1.839	
1971							1.525	1.219	1.831	
1972							1.550	1.226	1.874	
1973							1.145	0.905	1.385	
1974							1.060	0.816	1.304	
1975							1.073	0.893	1.253	
1976							0.816	0.660	0.972	
1977							0.840	0.664	1.016	
1978	112 013	72 637	151 389				0.999	0.779	1.219	
1979	211 396	80 748	342 044				1.216	0.932	1.500	
1980	76 671	38 311	115 032				1.691	1.289	2.093	
1981	102 304	18 966	185 642				1.636	1.336	1.936	
1982							1.655	1.365	1.945	
1983	111 473	72 599	150 347		Hammond		1.152	0.934	1.370	
1984	131 822	32 856	230 787	426 104	332 469	519 739	1.385	1.131	1.639	
1985	146 016	77 871	214 160	368 606	257 116	480 097	1.228	1.032	1.424	
1986	142 195	86 025	198 365	344 795	281 069	408 501	1.221	1.029	1.413	
1987	27 141	14 899	39 383	452 444	207 707	701 769	1.080	0.924	1.236	
1988	43 822	19 812	67 832	528 969	422 836	636 901	1.452	1.236	1.668	
1989	72 534	0	201 679	493 454	344 091	642 817	1.778	1.506	2.050	
1990	32 273	19 501	47 045	379 144	163 385	576 332	2.875	2.407	3.343	
1991	37 969	26 639	42 298	222 546	149 927	295 165	2.294	1.940	2.648	
1992	61 629	34 420	88 839	177 284	60 743	293 825	2.746	2.324	3.168	
1993	66 406	0	139 937	95 341	0	268 436	1.702	1.422	1.982	
1994	27 213	9 389	45 038							
1995										
1996										
1997										
1998										
1999										
2000										
Min.	27 141	0	39 383	95 341	0	268 436	0.82			
1st Q	42 359	17 949	62 635	253 106	153 292	323 499	1.11			
Med.	74 603	29 748	145 142	373 875	232 412	499 918	1.49			
3rd Q	116 965	72 609	199 194	445 859	319 619	621 759	1.70			
Max.	211 396	86 025	342 044	528 969	422 836	701 769	2.88			

YEAR	Abundance indices								
	CPUE (t/j) - OTB+OTM			CPUE (t/j) - OTB(May-Oct.)			CPUE (t/h) - OTB(May-Oct.)		
	Estimate All ages	Lower limit 95 % CI	Upper	Estimate All ages	Lower limit 95 % CI	Upper limit	Estimate All ages	Lower limit -2SE	Upper limit +2SE
1948									
1949									
1950									
1951									
1952									
1953									
1954									
1955									
1956									
1957									
1958									
1959									
1960									
1961									
1962									
1963									
1964									
1965									
1966									
1967									
1968									
1969									
1970									
1971									
1972									
1973									
1974									
1975									
1976									
1977									
1978									
1979									
1980									
1981							3.727	2.339	5.115
1982							2.438	1.936	2.940
1983							2.218	1.744	2.692
1984							1.814	1.456	2.172
1985							1.153	0.929	1.377
1986							1.284	1.034	1.534
1987							1.064	0.854	1.274
1988							1.298	1.006	1.590
1989							1.915	1.385	2.445
1990	12.380	9.104	15.656	12.410	7.976	16.844	3.661	2.619	4.703
1991	9.904	7.268	12.540	10.890	7.666	14.114	2.552	1.960	3.144
1992	12.360	9.084	15.636	10.710	7.618	13.802	2.907	2.217	3.597
1993	7.780	5.694	9.866	8.184	5.846	10.522	2.430	1.908	2.952
1994									
1995									
1996									
1997									
1998									
1999									
2000									

7.78	8.18	1.06
9.37	10.08	1.30
11.13	10.80	2.22
12.37	11.27	2.55
12.38	12.41	3.73

Redfish on Scotian SHelf

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	SSB (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959	4WX											
1960				19 883	19 883							
1961				20 245	20 245							
1962			527	28 458	28 985							
1963			652	29 086	29 738							
1964			496	12 283	12 779							
1965			1 010	12 384	13 394							
1966			1 294	29 587	30 881							
1967			1 812	5 606	7 418							
1968			1 729	1 616	3 345							
1969			3 891	2 602	6 493							
1970			9 703	10 936	20 639		For former mgt unit					
1971			13 392	18 337	31 729							
1972			9 669	21 526	31 195							
1973			5 461	16 374	21 835							
1974			3 839	13 901	17 740	40 000						
1975			3 958	9 442	13 400	30 000						
1976			3 252	4 785	8 037	20 000						
1977			2 436	3 063	5 499	20 000						
1978			1 987	2 314	4 301	20 000						
1979			2 579	890	3 469	20 000						
1980			3 805	987	4 792	30 000						
1981			4 339	1 159	5 498	30 000						
1982			3 221	1 724	4 945	30 000						
1983			4 539	878	5 417	30 000						
1984			4 806	908	5 714	30 000						
1985			6 000		6 000	30 000						
1986			6 900		6 900	30 000						
1987			6 100		6 100	30 000						
1988			3 900		3 900	30 000						
1989			3 200		3 200	30 000						
1990			2 300		2 300	30 000						
1991			2 000		2 000	30 000						
1992			2 400		2 400	10 000						
1993			5 100		5 100	10 000						
1994					0	10 000						
1995					0							
1996					0							
1997					0							
1998					0							
1999					0							
2000					0							
Minimum					0							
1st quart.					3 200							
MEDIAN					5 499							
3rd quart.					13 400							
Maximum					31 729							

REDFISH SUMMARY

June 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90, annual thereafter					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7 to 9	7 to 9 (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	Spawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			20 846	206 164	227 010							
1961			24 824	130 351	155 175							
1962			27 724	85 365	113 089							
1963			37 612	96 179	133 791							
1964			36 110	118 670	154 780							
1965			57 725	146 984	204 709							
1966			82 591	116 894	199 485							
1967			79 436	115 179	194 615							
1968			92 600	74 127	166 727							
1969			96 266	116 805	213 071							
1970			110 447	102 647	213 094							
1971			112 958	140 644	253 602							
1972			109 853	155 891	265 744							
1973			159 294	133 880	293 174							
1974			87 191	131 894	219 085	179 000						
1975			103 168	93 370	196 538	137 000						
1976			89 773	65 174	154 947	150 000						
1977			66 825	49 668	116 493	134 000						
1978			74 059	36 535	110 594	134 000						
1979			81 894	39 379	121 273	140 000						
1980			49 688	51 594	101 282	165 900						
1981			72 157	45 554	117 711	168 000						
1982			65 706	48 569	114 275	179 000						
1983			58 624	47 165	105 789	181 000						
1984			55 925	59 107	115 032	198 600						
1985			75 556	59 939	135 495	198 600						
1986			76 309	87 522	163 831	203 600						
1987			78 951	153 674	232 625	203 600						
1988			77 871	106 838	184 709	195 000						
1989			74 149	104 991	179 140	196 000						
1990			81 484	124 310	205 794	221 000						
1991			84 430	82 983	167 413	200 000						
1992			97 924	83 752	181 676	193 000						
1993			84 239	68 126	152 365	176 000						
1994						116 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			20 846	36 535	101 282	116 000						
1st quart.			60 395	61 248	124 403	150 000						
MEDIAN			78 411	94 775	167 070	179 000						
3rd quart.			89 128	122 900	205 523	198 600						
Maximum			159 294	206 164	293 174	221 000						

Grenadier in SA0+1
June 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0									
1961			0									
1962			0									
1963			0									
1964			0									
1965			0									
1966			0									
1967			0	6	6							
1968			0	6 191	6 191							
1969			0	2 710	2 710							
1970			0	6 525	6 525							
1971			0	8 304	8 304							
1972			0	8 094	8 094							
1973			0	4 884	4 884							
1974			0	12 318	12 318							
1975			0	4 953	4 953	10 000						
1976			0	8 503	8 503	14 000						
1977			0	2 935	2 935	8 000						
1978			0	5 839	5 839	8 000						
1979			0	6 921	6 921	8 000						
1980			0	1 753	1 753	8 000						
1981			0	479	479	8 000						
1982			0	91	91	8 000						
1983			0	68	68	8 000						
1984			0	50	50	8 000						
1985			0	55	55	8 000						
1986			0	86	86	8 000						
1987			0	377	377	8 000						
1988			0	518	518	8 000						
1989			0	80	80	8 000						
1990			0	240	240	8 000						
1991			0	160	160	8 000						
1992			0	190	190	8 000						
1993			1	99	100	8 000						
1994			0			8 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					6							
1st quart.					96							
MEDIAN					518							
3rd quart.					6 015							
Maximum					12 318							

Roundnose Grenadier in SA 2+3
June 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
			Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0									
1961			0									
1962			0									
1963			0									
1964			0									
1965			0									
1966			0									
1967			0	17 304	17 304							
1968			0	31 263	31 263							
1969			0	12 779	12 779							
1970			0	24 428	24 428							
1971			0	75 445	75 445							
1972			0	24 386	24 386							
1973			0	17 564	17 564							
1974			0	28 416	28 416	32 000						
1975			0	27 425	27 425	32 000						
1976			16	20 577	20 593	35 000						
1977			15	15 371	15 386	35 000						
1978			9	20 693	20 702	35 000						
1979			4	7 777	7 781	35 000						
1980			0	2 053	2 053	30 000						
1981			0	7 085	7 085	27 000						
1982			0	4 344	4 344	27 000						
1983			0	3 569	3 569	11 000						
1984			0	3 873	3 873	11 000						
1985			0	4 948	4 948	11 000						
1986			9	7 415	7 424	11 000						
1987			10	7 287	7 297	11 000						
1988			2	5 380	5 382	11 000						
1989			20	4 646	4 666	11 000						
1990			177	642	819	11 000						
1991			150	477	627	11 000						
1992			0	2 982	2 982	11 000						
1993			239	4 169	4 408	11 000						
1994			0			3 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					627							
1st quart.					4 376							
MEDIAN					7 424							
3rd quart.					20 648							
Maximum					75 445							

Argentine in 4VWX
June 92

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	Spawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0									
1961			0									
1962			0									
1963			0	8 127	8 127							
1964			0	4 943	4 943							
1965			0	5 611	5 611							
1966			0	14 983	14 983							
1967			0	4 233	4 233							
1968			0	2 678	2 678							
1969			0	5 354	5 354							
1970			0	4 553	4 553							
1971			0	6 715	6 715							
1972			0	5 868	5 868							
1973			0	1 444	1 444							
1974			0	17 496	17 496							
1975			0	14 694	14 694							
1976			0	7 010	7 010							
1977			0	2 489	2 489							
1978			0	1 897	1 897							
1979			0	2 640	2 640							
1980			0	2 053	2 053	20 000						
1981			0	369	369	20 000						
1982			0	417	417	20 000						
1983			0	863	863							
1984			0	360	360							
1985			0	292	292	10 000						
1986			0	203	203	10 000						
1987			0	83	83	10 000						
1988			0	351	351	10 000						
1989			0	107	107	10 000						
1990			0	217	217	10 000						
1991			0	143	143	10 000						
1992			0		0	10 000						
1993			0		0	10 000						
1994			0			1 500						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					0							
1st quart.					322							
MEDIAN					2 053							
3rd quart.					5 483							
Maximum					17 496							

OTHER GROUNDFISH - SUMMARY

June 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7 to 9	7 to 9 (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	Spawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960												
1961												
1962												
1963			0	8 127	8 127							
1964			0	4 943	4 943							
1965			0	5 611	5 611							
1966			0	14 983	14 983							
1967			0	21 543	21 543							
1968			0	40 132	40 132							
1969			0	20 843	20 843							
1970			0	35 506	35 506							
1971			0	90 464	90 464							
1972			0	38 348	38 348							
1973			0	23 892	23 892							
1974			0	58 230	58 230	32 000						
1975			0	47 072	47 072	42 000						
1976			16	36 090	36 106	49 000						
1977			15	20 795	20 810	43 000						
1978			9	28 429	28 438	43 000						
1979			4	17 338	17 342	43 000						
1980			0	5 859	5 859	58 000						
1981			0	7 933	7 933	55 000						
1982			0	4 852	4 852	55 000						
1983			0	4 500	4 500	19 000						
1984			0	4 283	4 283	19 000						
1985			0	5 295	5 295	29 000						
1986			9	7 704	7 713	29 000						
1987			10	7 747	7 757	29 000						
1988			2	6 249	6 251	29 000						
1989			20	4 833	4 853	29 000						
1990			177	1 099	1 276	29 000						
1991			150	780	930	29 000						
1992			0	3 172	3 172	29 000						
1993			240	4 268	4 508	29 000						
1994						12 500						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			0	780	930	12 500						
1st quart.			0	4 898	4 898	29 000						
MEDIAN			0	7 933	7 933	29 000						
3rd quart.			9	26 161	26 165	43 000						
Maximum			240	90 464	90 464	58 000						

Plaice in 2+3K
May 94

	Catches (t)					TAC (t)	Assessment Results ADAPT					
YEAR	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	SSB (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960	15		15	1	16							
1961	67		67	0	67							
1962	60		60	1	61							
1963	116		116	1 305	1 421							
1964	95		95	2 973	3 068							
1965	224		224	5 364	5 588							
1966	228		228	2 721	2 949							
1967	395		395	3 196	3 591							
1968	1 023		1 023	4 928	5 951							
1969	1 689		1 689	5 213	6 902							
1970	3 751		3 751	8 935	12 686							
1971	2 486		2 486	2 862	5 348							
1972	1 188	9	1 197	7 924	9 121							
1973	1 368	16	1 384	3 756	5 140							
1974	462	106	568	5 052	5 620	10 000						
1975	813	46	859	4 888	5 747	8 000						
1976	1 741	736	2 477	3 630	6 107	8 000						
1977	1 925	4 691	6 616	909	7 525	8 000						
1978	1 723	1 452	3 175	347	3 522	6 000						
1979	1 792	1 058	2 850	115	2 965	6 000						
1980	1 140	3 746	4 886	154	5 040	6 000						
1981	1 069	6 332	7 401	144	7 545	6 000						
1982	576	1 265	1 841	59	1 900	10 000						
1983	445	863	1 308	325	1 633	10 000						
1984	559	502	1 061	114	1 175	10 000						
1985	558	160	718	35	753	10 000						
1986	1 007	1 903	2 910	108	3 018	10 000						
1987	737	165	902	161	1 063	10 000						
1988	630	252	882	71	953	10 000						
1989	861	3 291	4 152	96	4 248	10 000						
1990	573	1 223	1 796	29	1 825	10 000						
1991	214	280	494	16	510	10 000						
1992	83	21	104	0	104	10 000						
1993	78	1	79	0	79	5 000						
1994			0			500						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					16							
1st quart.					1 091							
MEDIAN					3043							
3rd quart.					5 612							
Maximum					12 686							

Plaice in 2+3K

	Abundance indices								
	RV in 2J ('000 t)			RV in 3K ('000)			RV 2J3K (t)		Mean weight at age 7 (kg)
YEAR	Estimate 1+	Lower limit	Upper limit	Estimate 1+	Lower limit	Upper limit	Estimate 1+	C/B	
1948									
1949									
1950									
1951									
1952									
1953									
1954									
1955									
1956									
1957									
1958									
1959									
1960									
1961									
1962									
1963									
1964									
1965									
1966									
1967									
1968									
1969									
1970									
1971									
1972									
1973									
1974									
1975									
1976									
1977	105.00								
1978	58.00			57.00			115000	3.06%	
1979	38.00			31.00			69000	4.30%	
1980	59.00			33.00			92000	5.48%	
1981	65.00			40.00			105000	7.19%	
1982	89.00			27.00			116000	1.64%	
1983	95.00			32.00			127000	1.29%	
1984	54.00			40.00			94000	1.25%	
1985	42.00			27.00			69000	1.09%	
1986	37.00			33.00			70000	4.31%	
1987	23.00			24.00			47000	2.26%	
1988	33.00			18.00			51000	1.87%	
1989	30.00			17.00			47000	9.04%	
1990	16.00			8.70			24700	7.39%	
1991	6.50			6.30			12800	3.98%	
1992	2.40			3.10			5500	1.89%	
1993	2.10			3.40			5500	1.44%	
1994									
1995									
1996									
1997									
1998									
1999									
2000									
Min.	2			3			5 500		
1st Q	23			15			41 425		
Med.	38			27			69 000		
3rd Q	59			33			96 750		
Max.	105			57			127 000		

American plaice in 3LNO

June 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age 5 (million)	Stock Size 5+ (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			21 352	2 695	24 047							
1961			14 903	3 010	17 913							
1962			15 217	982	16 199							
1963			24 591	1 128	25 719							
1964			35 474	3 093	38 567							
1965			45 365	7 896	53 261							
1966			51 225	13 786	65 011							
1967			54 190	40 223	94 413							
1968			48 674	24 493	73 167							
1969			64 815	14 622	79 437							
1970			54 929	11 724	66 653							
1971			49 394	18 494	67 888							
1972			41 605	17 756	59 361							
1973			38 586	14 257	52 843	60 500						
1974			35 101	11 196	46 297	60 000						
1975			34 015	9 206	43 221	60 000	0.50	0.36	294	1 028		
1976			47 806	4 019	51 825	47 000	0.50	0.36	279	1 068		
1977			42 579	1 402	43 981	47 000	0.39	0.29	233	1 033		
1978			48 634	1 394	50 028	47 000	0.58	0.40	218	1 001		
1979			47 131	1 438	48 569	47 000	0.20	0.17	200	950		
1980			48 296	790	49 086	47 000	0.30	0.23	190	892		
1981			48 177	1 981	50 158	55 000	0.74	0.48	172	830		
1982			49 620	1 432	51 052	55 000	0.85	0.53	173	788		
1983			35 907	2 628	38 535	55 000	0.59	0.41	157	735		
1984			33 756	5 689	39 445	55 000	0.67	0.45	146	702		
1985			40 024	14 188	54 212	49 000	0.62	0.42	128	656		
1986			33 409	31 161	64 570	55 000	1.03	0.59	96	572		
1987			33 967	21 045	55 012	48 000	0.77	0.49	81	457		
1988			26 832	14 003	40 835	40 000	0.75	0.49	78	377		
1989			27 901	15 468	43 369	30 300	0.73	0.48	73	328		
1990			22 560	9 901	32 461	24 900	0.89	0.54	102	290		
1991			22 486	11 331	33 817	25 800	0.67	0.45	75	256		
1992			9 542	3 070	12 612	25 800	0.72	0.47	29	186		
1993			7 585	9 672	17 257	10 500	NO VPA DONE in 1994					
1994						4 800						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					12 612		0.20	0.17	29	186		
1st quart.					38 543		0.52	0.37	85	397		
MEDIAN					48 828		0.67	0.45	151	718		
3rd quart.					54 812		0.75	0.48	198	935		
Maximum					94 413		1.03	0.59	294	1 068		

American plaice in 3LNO

YEAR	Abundance indices									Mean weight at age 9 (kg)
	CAN Spring RV (millions)			Survey 2 (units)			CPUE (t/hour)			
	Estimate 1+	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956							1.432			
1957							1.346			
1958							1.296			
1959							1.278			
1960							1.221			
1961							1.110			
1962							0.934			
1963							1.060			
1964							1.092			
1965							1.044			
1966							1.015			
1967							0.935			
1968							0.685			
1969							0.593			
1970							0.573			
1971							0.525			
1972							0.512			
1973	571						0.563			
1974							0.452			0.58
1975	681						0.429			0.56
1976	990						0.417			0.56
1977	1 257						0.436			0.61
1978	1 140						0.462			0.51
1979	1 115						0.505			0.55
1980	1 127						0.597			0.54
1981	1 262						0.593			0.49
1982	957						0.596			0.49
1983							0.638			0.66
1984	617						0.568			0.55
1985	575						0.619			0.55
1986	529						0.457			0.55
1987	636						0.434			0.50
1988	579						0.437			0.49
1989	509						0.441			0.49
1990	379						0.448			0.55
1991	214						0.257			0.61
1992	111						0.170			0.55
1993	126						0.106			0.63
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	111						0.11			0.49
1st Q	519						0.45			0.51
Med.	617						0.58			0.55
3rd Q	1 053						1.00			0.57
Max.	1 262						1.43			0.66

American plaice in 3M

June 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits from RV	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age 2 (million)	(ages) (million)	Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0									
1961			0	2 000	2 000							
1962			14	0	14							
1963			0	179	179							
1964			0	1 876	1 876							
1965			19	5 265	5 284							
1966			0	4 073	4 073							
1967			57	97	154							
1968			100	125	225							
1969			12	113	125							
1970			0	62	62							
1971			0	1 079	1 079							
1972			0	861	861							
1973			68	436	504							
1974			211	1 717	1 928	2 000						
1975			140	1 568	1 708	2 000						
1976			191	1 001	1 192	2 000						
1977			30	1 588	1 618	1 600						
1978			7	1 326	1 333	4 000						
1979			10	786	796	2 000						
1980			1	1 184	1 185	2 000						
1981			0	632	632	2 000						
1982			0	1 072	1 072	2 000						
1983			0	1 889	1 889	2 000						
1984			0	1 302	1 302	2 000						
1985			0	1 720	1 720	2 000						
1986			0	3 754	3 754	2 000						
1987			0	5 607	5 607	2 000						
1988			0	2 861	2 861	2 000			2.28			
1989			0	3 895	3 895	2 000			0.45			
1990			0	788	788	2 000			0.36			
1991			0	1 600	1 600	2 000			0.31			
1992			0	800	800	2 000			0.74			
1993			0	275	275	2 000			0.01			
1994			0			1 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					14				0.01			
1st quart.					632				0.32			
MEDIAN					1 192				0.41			
3rd quart.					1 889				0.67			
Maximum					5 607				2.28			

American plaice in 3M

YEAR	Abundance indices									
	EEC RV (t)			Russian RV (t)			CPUE (units)			Mean weight at age 7 (kg)
	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978										
1979										
1980										
1981										
1982										
1983				8 900						
1984				7 500						
1985				7 800						
1986				20 200						
1987				9 300						
1988	11 868			6 500						
1989	10 533			5 000						
1990	9 101			1 200						
1991	7 565			14 400						
1992	6 492			1 000						
1993	5 949			2 700						
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	5 949			1 000						
1st Q	6 760			3 850						
Med.	8 333			7 500						
3rd Q	10 175			9 100						
Max.	11 868			20 200						

American Plaice in 3Ps

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	SSB (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			827	60	887							
1961			1 424	31	1 455							
1962			1 022	2	1 024							
1963			529	225	754							
1964			1 362	180	1 542							
1965			1 849	173	2 022							
1966			2 494	912	3 406							
1967			3 275	1 219	4 494							
1968			5 523	8 757	14 280							
1969			4 066	2 425	6 491							
1970			11 595	733	12 328							
1971			5 953	1 229	7 182							
1972	335	5 587	5 922	616	6 538							
1973	525	12 287	12 812	1 957	14 769							
1974	453	5 877	6 330	268	6 598	11 000						
1975	574	3 244	3 818	393	4 211	11 000						
1976	330	5 100	5 430	28	5 458	8 000						
1977	567	3 975	4 542	63	4 605	6 000						
1978	535	3 076	3 611	47	3 658	4 000						
1979	598	2 994	3 592	74	3 666	4 000						
1980	671	2 058	2 729	206	2 935	5 000						
1981	1 144	1 616	2 760	457	3 217	5 000						
1982	503	1 366	1 869	317	2 186	5 000						
1983	350	1 154	1 504	222	1 726	5 000						
1984	203	2 422	2 625	338	2 963	5 000						
1985	399	3 415	3 814	406	4 220	5 000						
1986	1 262	3 203	4 465	665	5 130	5 000						
1987	2 020	2 768	4 788	543	5 331	5 000						
1988	1 344	2 457	3 801	605	4 406	5 000						
1989	1 306	1 892	3 198	759	3 957	5 000						
1990	1 043	3 087	4 130	0	4 130	4 000						
1991	1 264	2 794	4 058	337	4 395	4 000						
1992	746	1 559	2 305	26	2 331	4 000						
1993	465	286	751	0	751	3 000						
1994			0			500						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					751							
1st quart.					2 222							
MEDIAN					4 044							
3rd quart.					5 281							
Maximum					14 769							

American Plaice in 3Ps

	Abundance indices									
	CAN RV (t)			FRENCH RV (Mean # per tow)			CPUE (units)			Mean weight at age 10 (kg)
YEAR	Feb. All ages	April All ages	Recruits (millions) Age 6	Estimate 1+	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974							0.458	0.374	0.542	0.69
1975							0.473	0.377	0.569	0.76
1976							0.385	0.317	0.453	0.63
1977							0.422	0.346	0.498	0.62
1978							0.417	0.337	0.497	0.55
1979							0.478	0.392	0.564	0.73
1980	35800.00		12.8	496			0.411	0.325	0.497	0.55
1981	26000.00		6.9	294			0.514	0.406	0.622	0.60
1982	39400.00		10.7	201			0.628	0.492	0.764	0.49
1983	45600.00		16.7	281			0.554	0.420	0.688	0.65
1984	22600.00		7.6	196			0.793	0.553	1.033	0.49
1985	64500.00		7.6	465			1.110	0.818	1.402	0.62
1986	30500.00		8.7	175			0.703	0.533	0.873	0.67
1987	33900.00		5.5	81			0.554	0.438	0.670	0.62
1988	27300.00		8.0	68			0.561	0.447	0.675	0.65
1989	17000.00		3.7	95			0.510	0.396	0.624	0.69
1990	5800.00		1.1	81			0.580	0.436	0.724	0.66
1991	12100.00		2.7	29			0.286	0.226	0.346	0.69
1992	6800.00		1.5	27			0.229	0.175	0.283	0.64
1993	2400.00	4 600	0.8							
1994		4 200	1.7							
1995										
1996										
1997										
1998										
1999										
2000										
Min.	2 400	4 200	0.8	27			0.23			0.49
1st Q	13 325	4 300	2.2	81			0.42			0.61
Med.	26 650	4 400	6.9	175			0.51			0.64
3rd Q	35 325	4 500	8.4	281			0.57			0.68
Max.	64 500	4 600	16.7	496			1.11			0.76

American Plaice in 4T
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	SSB (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			7 969		7 969							
1961			7 016		7 016							
1962			4 590		4 590							
1963			6 358		6 358							
1964			9 000		9 000							
1965	749	9 636	10 385		10 385							
1966	811	10 969	11 780		11 780							
1967	752	8 599	9 351		9 351							
1968	518	9 050	9 568		9 568							
1969	740	7 452	8 192		8 192							
1970	659	8 542	9 201		9 201							
1971	1 223	8 290	9 513		9 513							
1972	569	7 725	8 294		8 294							
1973	579	6 326	6 905		6 905							
1974	625	7 860	8 485		8 485	10 000						
1975	543	7 900	8 443		8 443	10 000						
1976	795	10 398	11 193		11 193	10 000						
1977	544	8 686	9 230		9 230	10 000						
1978	938	8 093	9 031		9 031	10 000						
1979	1 818	8 178	9 996		9 996	10 000						
1980	940	7 352	8 292		8 292	10 000						
1981	1 636	6 198	7 834		7 834	10 000						
1982	959	5 583	6 542		6 542	10 000						
1983	597	5 497	6 094		6 094	10 000						
1984	2 479	7 120	9 599		9 599	10 000						
1985	1 604	7 886	9 490		9 490	10 000						
1986	1 152	6 256	7 408		7 408	10 000						
1987	1 698	6 366	8 064		8 064	10 000						
1988	1 590	5 399	6 989		6 989	10 000						
1989	1 117	4 600	5 717		5 717	10 000						
1990	757	4 140	4 897		4 897	10 000						
1991	779	4 450	5 229		5 229	10 000						
1992	731	4 409	5 140		5 140	10 000						
1993	1 135	722	1 857		1 857	5 000						
1994			0			5 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					1 857							
1st quart.					6 633							
MEDIAN					8 242							
3rd quart.					9 321							
Maximum					11 780							

American Plaice in 4T

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV (#/tow) - Fall			Survey 2 (units)			CPUE (units)			
	Estimate 1+	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971	273	105	429							
1972	230	98	358							
1973	238	136	338							
1974	564	364	612							
1975	531	351	706							
1976	943	545	1 293							
1977	1 046	543	1 581							
1978	578	150	983							
1979	886	628	1 103							
1980	548	376	698							
1981	633	297	945							
1982	295	153	429							
1983	379	253	483							
1984	230	162	269							
1985	277	162	314							
1986	242	144	400							
1987	215	92	154							
1988	263	141	401							
1989	201	158	252							
1990	350	267	430							
1991	370	282	449							
1992	253	204	303							
1993	211	172	250							
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	201									
1st Q	240									
Med.	295									
3rd Q	556									
Max.	1 046									

American Plaice in 4VW

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			1 801	26	1 819							
1961			1 358	26	1 384							
1962			1 455	30	1 485							
1963			1 958	101	2 059							
1964			2 503	67	2 570							
1965			5 253	2 251	7 504							
1966			8 666	4 814	13 480							
1967			9 579	85	9 664							
1968			8 961	9 358	18 319							
1969			8 485	4 380	12 865							
1970			5 725	1 998	7 723							
1971			7 088	6 668	13 756							
1972			6 379	3 710	10 089							
1973			4 873	7 220	12 093							
1974			6 664	9 650	16 314							
1975			6 361	5 090	11 451							
1976			6 694	4 144	10 838							
1977			7 245	63	7 308							
1978			6 190	54	6 244							
1979			5 511	15	5 526							
1980			6 824	67	6 891							
1981			6 149	109	6 258							
1982			5 310	10	5 320							
1983			5 483	40	5 523							
1984			5 719	74	5 793							
1985			4 083	37	4 120							
1986			3 061	29	3 090							
1987			4 601	22	4 623							
1988			3 061	26	3 087							
1989			3 354	11	3 365							
1990			1 854	65	1 919							
1991			237	141	378							
1992			493	85	578							
1993			123		123							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					123							
1st quart.					2 699							
MEDIAN					5 660							
3rd quart.					9 983							
Maximum					18 319							

American Plaice in 4VW

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Summer RV Mean # per tow			Spring RV Mean # per tow			CPUE (units)			
	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	50.18	31.32	69.04							
1971	47.55	32.01	63.09							
1972	42.33	19.93	64.73							
1973	36.43	24.27	48.59							
1974	71.42	65.64	77.20							
1975	53.07	33.95	72.19							
1976	59.05	-3.03	121.13							
1977	34.72	11.26	58.18							
1978	38.22	2.54	73.90							
1979	57.65	-66.89	182.19							
1980	57.49	-20.49	135.47							
1981	50.69	11.59	89.79							
1982	49.29	16.47	82.11							
1983	49.03	11.49	86.57							
1984	52.25	7.81	96.69							
1985	41.36	13.66	69.06							
1986	36.28	23.70	48.86	20.04	12.50	27.58				
1987	32.83	1.51	64.15	23.12	16.96	29.28				
1988	28.32	5.52	51.12	21.22	9.88	32.56				
1989	37.73	16.29	59.17	12.16	8.38	15.94				
1990	43.61	8.87	78.35	22.78	17.26	28.30				
1991	51.21	23.77	78.65	16.53	6.97	26.09				
1992	29.97	23.51	36.43	13.42	9.42	17.42				
1993	27.78	21.92	33.64	10.76	6.50	15.02				
1994				12.47	7.25	17.69				
1995										
1996										
1997										
1998										
1999										
2000										
Min.	27.8			10.8						
1st Q	36.4			12.5						
Med.	45.6			16.5						
3rd Q	51.5			21.2						
Max.	71.4			23.1						

American plaice in 4X
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1352			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			913	44	957							
1961			151	47	198							
1962			187	55	242							
1963			150	100	250							
1964			335	177	512							
1965			289	405	694							
1966			447	279	726							
1967			945	161	1 106							
1968			867	79	946							
1969			815	55	870							
1970			578	57	635							
1971			425	120	545							
1972			476	90	566							
1973			273	66	339							
1974			303	155	458							
1975			262	34	296							
1976			238	71	309							
1977			414	35	449							
1978			489	23	512							
1979			818	10	828							
1980			666	15	681							
1981			437	77	514							
1982			311	66	377							
1983			480	104	584							
1984			220	115	335							
1985			282	35	317							
1986			560	32	592							
1987			251	11	262							
1988			362	4	366							
1989			480	1	481							
1990			464	6	470							
1991			980	8	988							
1992			414	9	423							
1993			9		9							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					9							
1st quart.					336							
MEDIAN					497							
3rd quart					670							
Maximum					1 106							

American plaice in 4X

	Abundance indices									
	Summer RV Mean # per tow			Survey 2 (units)			CPUE (units)			
YEAR	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Mean weight at age 7 (kg)
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	13.07	-8.29	34.43							
1971	6.44	1.00	11.88							
1972	5.66	1.78	9.54							
1973	5.02	2.46	7.58							
1974	13.47	7.09	19.85							
1975	4.51	2.51	6.51							
1976	1.80	1.02	2.58							
1977	1.94	0.96	2.92							
1978	5.21	3.51	6.91							
1979	3.72	1.92	5.52							
1980	6.13	2.73	9.53							
1981	4.46	2.20	6.72							
1982	8.15	3.53	12.77							
1983	6.01	4.39	7.63							
1984	8.57	4.03	13.11							
1985	4.62	1.52	7.72							
1986	7.63	2.19	13.07							
1987	7.67	4.57	10.77							
1988	11.31	3.17	19.45							
1989	8.37	4.75	11.99							
1990	2.87	1.41	4.33							
1991	8.08	0.90	15.26							
1992	9.33	2.75	15.91							
1993	5.26	2.36	8.16							
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	1.80									
1st Q	4.59									
Med.	6.07									
3rd Q	8.21									
Max.	13.47									

PLAICE

May 94

	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
YEAR	Canadian			Foreign	TOTAL		F 7 to 9	Expl. rate 7 to 9 (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass	
	Fixed	Mobile	Total								Total 3+ (000 t)	pawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			32 877	2 826	35 695							
1961			24 919	5 114	30 033							
1962			22 545	1 070	23 615							
1963			33 702	3 038	36 740							
1964			48 769	8 366	57 135							
1965			63 384	21 354	84 738							
1966			74 840	26 585	101 425							
1967			77 792	44 981	122 773							
1968			74 716	47 740	122 456							
1969			88 074	26 808	114 882							
1970			85 779	23 509	109 288							
1971			74 859	30 452	105 311							
1972			63 873	30 957	94 830							
1973			64 901	27 692	92 593	60 500						
1974			57 662	28 038	85 700	93 000						
1975			53 898	21 179	75 077	91 000						
1976			74 029	12 893	86 922	75 000						
1977			70 656	4 060	74 716	72 600						
1978			71 137	3 191	74 328	71 000						
1979			69 908	2 438	72 346	69 000						
1980			71 694	2 416	74 110	70 000						
1981			72 758	3 400	76 158	78 000						
1982			65 493	2 956	68 449	82 000						
1983			50 776	5 208	55 984	82 000						
1984			52 980	7 632	60 612	82 000						
1985			58 411	16 421	74 832	76 000						
1986			51 813	35 749	87 562	82 000						
1987			52 573	27 389	79 962	75 000						
1988			41 927	17 570	59 497	67 000						
1989			44 802	20 230	65 032	57 300						
1990			35 701	10 789	46 490	50 900						
1991			33 484	13 433	46 917	51 800						
1992			17 998	3 990	21 988	51 800						
1993			10 404	9 947	20 351	25 500						
1994						11 800						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			10 404	1 070	20 351	11 800						
1st quart			42 646	4 008	56 272	58 100						
MEDIAN			58 037	13 163	74 522	71 800						
3rd quart.			71 555	26 752	87 402	81 000						
Maximum			88 074	47 740	122 773	93 000						

Witch in 2J-3KL
May 94

	Catches (t)					TAC (t)	Assessment Results: ADAPT					
YEAR	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			0	400	400							
1961			0	0	0							
1962			29	49	78							
1963			17	928	945							
1964			103	941	1 044							
1965			128	4 019	4 147							
1966			187	3 510	3 697							
1967			901	3 200	4 101							
1968			446	10 220	10 666							
1969			1 355	11 230	12 585							
1970			4 020	14 010	18 030							
1971			8 030	8 023	16 053							
1972			5 520	11 908	17 428							
1973			3 761	20 600	24 361							
1974			1 868	14 095	15 963	22 000						
1975			1 352	10 853	12 205	22 000						
1976			2 081	8 544	10 625	17 000						
1977			4 371	3 947	8 318	17 000						
1978			1 979	4 925	6 904	17 000						
1979			1 392	2 705	4 097	17 000						
1980			1 459	1 364	2 823	17 000						
1981			2 661	1 533	4 194	8 000						
1982			1 206	1 775	2 981	8 000						
1983			1 483	1 605	3 088	8 000						
1984			2 077	2 731	4 808	8 000						
1985			1 305	1 698	3 003	8 000						
1986			1 199	2 717	3 916	8 000						
1987			854	3 621	4 475	5 000						
1988			3 270	884	4 154	5 000						
1989			4 059	847	4 906	5 000						
1990			3 271	294	3 565	4 000						
1991			2 799	1 209	4 008	4 000						
1992			1 707	629	2 336	4 000						
1993			342		342	4 000						
1994						1 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					0							
1st quart.					2 987							
MEDIAN					4 124							
3rd quart.					10 048							
Maximum					24 361							

Witch in 2J-3KL

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV Min. Biomass (t)			Survey 2 (units)			CPUE (t/hour)			
	2J All ages	3K All ages	3L All ages	Estimate (ages)	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974							0.566	0.010	1.122	
1975							0.363	0.009	0.717	
1976							0.354	0.000	0.710	
1977							0.556	0.328	0.784	
1978							0.330	0.166	0.494	
1979							0.745	0.403	1.087	
1980							0.603	0.331	0.875	
1981	1 968	31 268	9 054				0.376	0.158	0.594	
1982	3 577	22 520	8 017				0.646	0.032	1.260	
1983	2 750	36 823	7 297				1.158	0.462	1.854	
1984	2 039	36 128	8 272				0.399	0.179	0.619	
1985	2 122	23 585	4 902							
1986	4 142	14 649	7 153				1.480	0.072	2.888	
1987	1 511	14 670	6 800				0.617	0.199	1.035	
1988	1 061	11 947	7 280				0.769	0.413	1.125	
1989	1 518	5 444	4 893				2.177	1.035	3.319	
1990	2 062	11 297	6 228				1.157	0.671	1.643	
1991	1 417	2 458	3 015				0.591	0.329	0.853	
1992	542	395	1 489				0.412	0.248	0.576	
1993	273	633	394							
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	273						0.33			
1st Q	1 417						0.40			
Med.	1 968						0.60			
3rd Q	2 122						0.76			
Max.	4 142						2.18			

Witch in 3NO

June 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	pawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			5 000	1 000	6 000							
1961			5 000	0	5 000							
1962			4 482	276	4 758							
1963			895	1 288	2 183							
1964			1 055	11	1 066							
1965			1 324	853	2 177							
1966			3 644	3 878	7 522							
1967			2 863	8 640	11 503							
1968			1 503	9 096	10 599							
1969			479	4 229	4 708							
1970			723	6 040	6 763							
1971			178	14 787	14 965							
1972			3 419	5 758	9 177							
1973			4 943	1 748	6 691							
1974			2 807	5 238	8 045	10 000						
1975			1 137	5 031	6 168	10 000						
1976			3 044	2 991	6 035	10 000						
1977			3 013	2 746	5 759	10 000						
1978			1 165	2 308	3 473	10 000						
1979			1 193	1 884	3 077	7 000						
1980			425	1 995	2 420	7 000						
1981			381	2 044	2 425	5 000						
1982			1 760	1 972	3 732	5 000						
1983			1 674	1 947	3 621	5 000						
1984			834	1 975	2 809	5 000						
1985			2 746	6 025	8 771	5 000						
1986			2 937	6 194	9 131	5 000						
1987			2 829	4 767	7 596	5 000						
1988			1 927	5 398	7 325	5 000						
1989			1 241	2 447	3 688	5 000						
1990			2 654	1 525	4 179	5 000						
1991			2 624	2 223	4 847	5 000						
1992			4 316	600	4 916	5 000						
1993			4 164	250	4 414	5 000						
1994						3 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					1 066							
1st quart.					3 638							
MEDIAN					4 958							
3rd quart.					7 473							
Maximum					14 965							

Witch in 3NO

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Survey 1 (units)			Survey 2 (units)			CPUE (t/hour)			
	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974							0.325			
1975							0.282			
1976							0.254			
1977							0.353			
1978							0.226			
1979										
1980										
1981							0.323			
1982							0.726			
1983							0.364			
1984							0.271			
1985							0.523			
1986							0.462			
1987							0.392			
1988							0.293			
1989							0.366			
1990							0.644			
1991							0.194			
1992							0.235			
1993							0.161			
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.										
1st Q										
Med.										
3rd Q										
Max.										

Witch in 3Ps

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			1 000	300	1 300							
1961			1 000	100	1 100							
1962			963	10	973							
1963			771	153	924							
1964			963	48	1 011							
1965			555	15	570							
1966			1 344	100	1 444							
1967			3 790	1 015	4 805							
1968			2 561	1 570	4 131							
1969			2 309	1 787	4 096							
1970			2 591	111	2 702							
1971			2 193	57	2 250							
1972			1 517	77	1 594							
1973			2 340	567	2 907							
1974			1 699	87	1 786	3 000						
1975			1 370	58	1 428	3 000						
1976			866	37	903	3 000						
1977			4 192	55	4 247	3 000						
1978			1 001	6	1 007	3 000						
1979			829	25	854	3 000						
1980			821	20	841	3 000						
1981			416	53	469	3 000						
1982			433	56	489	3 000						
1983			262	125	387	3 000						
1984			442	36	478	3 000						
1985			477	120	597	3 000						
1986			723	606	1 329	3 000						
1987			1 149	124	1 273	3 000						
1988			577	59	636	1 000						
1989			852	69	921	1 000						
1990			956	0	956	1 000						
1991			1 100	0	1 100	1 000						
1992			1 080	0	1 080	1 000						
1993			953	0	953	1 000						
1994						1 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					387							
1st quart.					866							
MEDIAN					1 046							
3rd quart.					1 557							
Maximum					4 805							

Witch in 3Ps

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV Min. Biomass (t)			Survey 2 (units)			CPUE (units)			
	Feb. All ages	April All ages		Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976	3 398									
1977	8 090									
1978	2 052									
1979	2 982									
1980	4 330									
1981	5 475									
1982	1 124									
1983	4 956									
1984	3 739									
1985	2 836									
1986	6 223									
1987	3 864									
1988	4 595									
1989	4 254									
1990	3 157									
1991	5 937									
1992	5 065									
1993	2 098	3 189								
1994		1 939								
1995										
1996										
1997										
1998										
1999										
2000										
Min.	1 124	1 939								
1st Q	3 026	2 252								
Med.	4 059	2 564								
3rd Q	5 038	2 877								
Max.	8 090	3 189								

Witch in 4RST

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960	3 217	117	3 334	4	3 338							
1961	3 335	161	3 496	0	3 496							
1962	3 354	33	3 387	0	3 387							
1963	4 169	77	4 246	4	4 250							
1964	3 034	316	3 350	0	3 350							
1965	3 526	82	3 608	0	3 608							
1966	3 504	208	3 712	0	3 712							
1967	2 644	69	2 713	1	2 714							
1968	3 315	66	3 381	9	3 390							
1969	4 748	1	4 749	14	4 763							
1970	4 794	8	4 802	3	4 805							
1971	3 659	161	3 820	1	3 821							
1972	1 942	38	1 980	21	2 001							
1973	2 064	157	2 221	3	2 224							
1974	3 200	25	3 225	22	3 247							
1975	2 638	49	2 687	35	2 722							
1976	6 456	125	6 581	294	6 875							
1977	2 992	12	3 004	32	3 036	3 500						
1978	4 300	186	4 486	24	4 510	3 500						
1979	4 380	155	4 535	26	4 561	5 000						
1980	3 363	155	3 518	9	3 527	5 000						
1981	1 853	59	1 912	0	1 912	5 000						
1982	1 254	28	1 282	0	1 282	3 500						
1983	1 134	43	1 177	0	1 177	3 500						
1984	1 035	72	1 107	0	1 107	3 500						
1985	1 404	256	1 660	0	1 660	3 500						
1986	1 406	416	1 822	1	1 823	3 500						
1987	2 098	511	2 609	0	2 609	3 500						
1988	2 245	285	2 530	0	2 530	3 500						
1989	2 284	47	2 331	16	2 347	3 500						
1990	1 241	31	1 272	0	1 272	3 500						
1991	937	56	993	0	993	3 500						
1992	950	29	979	0	979	3 500						
1993	794	107	901	0	901	3 500						
1994			0			1 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					901							
1st quart.					1 845							
MEDIAN					2 879							
3rd quart.					3 588							
Maximum					6 875							

Witch in 4RST

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV (#/tow) in 4R			RV (#/tow) in 4S			RV (#/tow) in 4RST			
	GADUS -	Hammond	Needler	GADUS -	Hammond	Needler	GADUS -	Hammond	Needler	
	All ages			All ages			All ages			
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978										
1979										
1980										
1981										
1982										
1983	11.84			5.87			8.10			
1984	19.17	5.75		13.73	8.24		14.58	6.83		
1985	26.47	4.18		33.60	12.45		30.94	10.14		
1986	25.32	9.88		27.36	42.41		25.59	31.35		
1987	24.03	7.41		20.56	8.19		20.61	9.65		
1988	14.79	5.66		11.20	8.16		14.13	8.70		
1989	14.49	2.93		15.18	7.47		14.18	5.92		
1990	3.94		2.90	17.78		3.65	14.55		4.10	
1991	9.22		2.68	19.15		4.00	14.62		4.74	
1992	9.11		1.02	9.51		1.36	9.20		2.54	
1993	5.22		0.50	33.07		0.46	19.89		0.81	
1994	10.60			5.07			9.39			
1995										
1996										
1997										
1998										
1999										
2000										
Min.	3.9	2.9	0.5	5.1	7.5	0.5	8.1	5.9	0.8	
1st Q	9.2	4.6	0.9	10.8	8.2	1.1	12.9	7.3	2.1	
Med.	13.2	5.7	1.9	16.5	8.2	2.5	14.6	9.2	3.3	
3rd Q	20.4	7.0	2.7	22.3	11.4	3.7	20.1	10.0	4.3	
Max.	26.5	9.9	2.9	33.6	42.4	4.0	30.9	31.4	4.7	

Witch in 4VW

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			5 725	114	5 839							
1961			4 915	103	5 018							
1962			5 614	163	5 777							
1963			6 943	468	7 411							
1964			8 219	153	8 372							
1965			7 654	4 868	12 522							
1966			6 966	7 322	14 288							
1967			7 205	228	7 433							
1968			8 078	12 869	20 947							
1969			5 915	7 386	13 301							
1970			4 160	1 081	5 241							
1971			6 041	10 682	16 723							
1972			5 346	5 307	10 653							
1973			5 471	7 963	13 434							
1974			5 457	1 460	6 917							
1975			3 125	5 466	8 591							
1976			2 181	3 220	5 401							
1977			1 905	105	2 010							
1978			1 967	136	2 103							
1979			1 774	7	1 781							
1980			1 978	12	1 990							
1981			1 266	13	1 279							
1982			884	6	890							
1983			991	13	1 004							
1984			1 306	34	1 340							
1985			1 681	65	1 746							
1986			2 329	54	2 383							
1987			2 678	47	2 725							
1988			2 294	112	2 406							
1989			1 765	0	1 765							
1990			1 304	0	1 304							
1991			1 323	3	1 326							
1992			1 025	6	1 031							
1993			532	0	532							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					532							
1st quart.					1 751							
MEDIAN					3 872							
3rd quart.					8 137							
Maximum					20 947							

Witch in 4VW

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Summer RV Mean # per tow			Spring RV Mean # per tow			CPUE (units)			
	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	4.91	3.27	6.55							
1971	6.06	2.08	10.04							
1972	3.04	1.30	4.78							
1973	8.79	0.63	16.95							
1974	19.27	-5.93	44.47							
1975	5.33	2.39	8.27							
1976	3.28	1.68	4.88							
1977	3.55	2.19	4.91							
1978	3.15	1.47	4.83							
1979	1.64	0.68	2.60							
1980	3.44	0.94	5.94							
1981	3.78	2.16	5.40							
1982	3.44	2.32	4.56							
1983	3.91	1.39	6.43							
1984	2.69	1.01	4.37							
1985	4.56	1.96	7.16							
1986	5.68	2.90	8.46	4.19	1.39	6.99				
1987	2.28	1.48	3.08	9.13	2.81	15.45				
1988	2.96	2.08	3.84	5.43	1.33	9.53				
1989	6.08	1.76	10.40	3.71	1.51	5.91				
1990	2.03	1.21	2.85	1.76	0.96	2.56				
1991	3.27	1.97	4.57	2.25	0.93	3.57				
1992	2.97	1.43	4.51	1.93	0.85	3.01				
1993	3.52	2.22	4.82	1.57	0.57	2.57				
1994				2.65	1.09	4.21				
1995										
1996										
1997										
1998										
1999										
2000										
Min.	1.6			1.6						
1st Q	3.0			1.9						
Med.	3.5			2.7						
3rd Q	5.0			4.2						
Max.	19.3			9.1						

Witch in 4X
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			12	28	40							
1961			36	23	59							
1962			24	37	61							
1963			29	46	75							
1964			187	70	257							
1965			56	365	421							
1966			80	144	224							
1967			291	92	383							
1968			694	41	735							
1969			756	36	792							
1970			760	47	807							
1971			775	366	1 141							
1972			563	135	698							
1973			383	152	535							
1974			373	125	498							
1975			281	50	331							
1976			285	56	341							
1977			402	19	421							
1978			172	16	188							
1979			283	7	290							
1980			320	11	331							
1981			421	41	462							
1982			527	56	583							
1983			482	177	659							
1984			431	162	593							
1985			452	73	525							
1986			553	78	631							
1987			472	20	492							
1988			529	12	541							
1989			524	3	527							
1990			638	7	645							
1991			602	3	605							
1992			828	1	829							
1993			373	0	373							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					40							
1st quart.					331							
MEDIAN					495							
3rd quart.					625							
Maximum					1 141							

Witch in 4X

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Summer RV Mean # per tow			Survey 2 (units)			CPUE (units)			
	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	2.10	-0.54	4.74							
1971	0.92	-2.04	3.88							
1972	3.20	1.80	4.60							
1973	4.88	2.48	7.28							
1974	3.42	2.72	4.12							
1975	1.97	0.31	3.63							
1976	1.14	0.68	1.60							
1977	4.47	3.35	5.59							
1978	2.37	1.23	3.51							
1979	0.95	0.35	1.55							
1980	1.40	-0.62	3.42							
1981	3.60	2.10	5.10							
1982	3.63	2.81	4.45							
1983	2.28	0.56	4.00							
1984	4.87	1.83	7.91							
1985	1.40	-0.86	3.66							
1986	2.55	1.89	3.21							
1987	1.10	0.54	1.66							
1988	1.60	-3.30	6.50							
1989	1.70	0.58	2.82							
1990	0.77	0.15	1.39							
1991	1.94	1.44	2.44							
1992	0.61	0.21	1.01							
1993	1.47	0.69	2.25							
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	0.6									
1st Q	1.3									
Med.	2.0									
3rd Q	3.3									
Max.	4.9									

WITCH

May 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
	Canadian			Foreign	TOTAL		F 7 to 9	Expl. rate 7 to 9 (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass	
	Fixed	Mobile	Total								Total 3+ (000 t)	pawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			15 071	1 846	16 917							
1961			14 447	226	14 673							
1962			14 499	535	15 034							
1963			12 901	2 887	15 788							
1964			13 877	1 223	15 100							
1965			13 325	10 120	23 445							
1966			15 933	14 954	30 887							
1967			17 763	13 176	30 939							
1968			16 663	33 805	50 468							
1969			15 563	24 682	40 245							
1970			17 056	21 292	38 348							
1971			21 037	33 916	54 953							
1972			18 345	23 206	41 551							
1973			19 119	31 033	50 152							
1974			15 429	21 027	36 456	35 000						
1975			9 952	21 493	31 445	35 000						
1976			15 038	15 142	30 180	30 000						
1977			16 887	6 904	23 791	33 500						
1978			10 770	7 415	18 185	33 500						
1979			10 006	4 654	14 660	32 000						
1980			8 521	3 411	11 932	32 000						
1981			7 057	3 684	10 741	21 000						
1982			6 092	3 865	9 957	19 500						
1983			6 069	3 867	9 936	19 500						
1984			6 197	4 938	11 135	19 500						
1985			8 321	7 981	16 302	19 500						
1986			9 563	9 650	19 213	19 500						
1987			10 591	8 579	19 170	16 500						
1988			11 127	6 465	17 592	14 500						
1989			10 772	3 382	14 154	14 500						
1990			10 095	1 826	11 921	13 500						
1991			9 441	3 438	12 879	13 500						
1992			9 935	1 236	11 171	13 500						
1993			7 265	250	7 515	13 500						
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			6 069	226	7 515	13 500						
1st quart.			9 656	3 389	13 198	14 500						
MEDIAN			12 014	6 685	17 255	19 500						
3rd quart.			15 530	15 095	30 926	32 000						
Maximum			21 037	33 916	54 953	35 000						

Yellowtail Flounder in 3LNO
June 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	pawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			5	0	5							
1961			100	0	100							
1962			67	0	67							
1963			138	380	518							
1964			126	21	147							
1965			3 075	55	3 130							
1966			4 185	2 841	7 026							
1967			2 122	6 756	8 878							
1968			4 180	9 160	13 340							
1969			10 494	5 214	15 708							
1970			22 814	3 612	26 426							
1971			24 206	13 136	37 342							
1972			26 939	12 320	39 259							
1973			28 492	4 323	32 815	50 000						
1974			17 053	7 260	24 313	40 000						
1975			18 458	4 436	22 894	35 000						
1976			7 910	147	8 057	9 000						
1977			11 295	343	11 638	12 000						
1978			15 091	375	15 466	15 000						
1979			18 116	235	18 351	18 000						
1980			12 011	366	12 377	18 000						
1981			14 122	558	14 680	21 000						
1982			11 479	1 840	13 319	23 000						
1983			9 085	1 388	10 473	19 000						
1984			12 437	4 298	16 735	17 000						
1985			13 440	15 523	28 963	15 000						
1986			14 168	16 008	30 176	15 000						
1987			13 420	2 894	16 314	15 000						
1988			10 607	5 551	16 158	15 000						
1989			5 009	5 198	10 207	5 000						
1990			4 969	9 020	13 989	5 000						
1991			6 642	9 614	16 256	7 000						
1992			6 809	3 948	10 757	7 000						
1993			6 697	6 868	13 565	7 000						
1994						7 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					5							
1st quart.					9 210							
MEDIAN					13 777							
3rd quart.					17 947							
Maximum					39 259							

Yellowtail Flounder in 3LNO

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Spring RV (millions)			RV Recruitment Index			Stan. CPUE (t per hour)			
	Estimate 1+	Lower limit	Upper limit	Estimate (millions) 1-4	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965							1.164			
1966							1.129			
1967							1.107			
1968							0.939			
1969							0.822			
1970							0.816			
1971							0.781			
1972							0.697			
1973							0.796			
1974							0.530			
1975	305						0.526			
1976	307						0.481			
1977	321						0.580			0.48
1978	237						0.588			0.55
1979	269						0.611			0.48
1980	340						0.681			0.55
1981	274						0.679			0.51
1982	281						0.624			0.47
1983							0.702			0.51
1984	316						0.682			0.49
1985	206						0.711			0.50
1986	191			85			0.523			0.47
1987	168			263			0.541			0.45
1988	100			99			0.501			0.45
1989	132			210			0.507			0.44
1990	150			239			0.579			0.45
1991	134			325			0.316			0.48
1992	84			153			0.344			0.47
1993	124			177			0.431			0.44
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	84			85			0.32			0.44
1st Q	138			139			0.53			0.45
Med.	221			193			0.62			0.48
3rd Q	299			245			0.78			0.50
Max.	340			325			1.16			0.55

Yellowtail flounder in 4VW

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			913	1	914							
1961			2 908	0	2 908							
1962			3 479	0	3 479							
1963			3 759	129	3 888							
1964			5 231	18	5 249							
1965			5 295	585	5 880							
1966			3 712	973	4 685							
1967			4 956	15	4 971							
1968			5 204	7 719	12 923							
1969			2 383	1 242	3 625							
1970			735	2 621	3 356							
1971			825	732	1 557							
1972			853	468	1 321							
1973			303	1 071	1 374							
1974			378	325	703							
1975			909	448	1 357							
1976			392	282	674							
1977			1 135	6	1 141							
1978			1 226	15	1 241							
1979			1 799	0	1 799							
1980			2 235	1	2 236							
1981			2 656	6	2 662							
1982			2 409	2	2 411							
1983			2 102	0	2 102							
1984			2 284	6	2 290							
1985			941	6	947							
1986			694	0	694							
1987			1 041	0	1 041							
1988			988	1	989							
1989			1 459	0	1 459							
1990			2 930	1	2 931							
1991			1 328	3	1 331							
1992			1 373	0	1 373							
1993			1 648	0	1 648							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					674							
1st quart.					1 261							
MEDIAN					1 724							
3rd quart.					3 250							
Maximum					12 923							

Yellowtail flounder in 4VW

	Abundance indices									
	Summer RV Mean # per tow			Spring RV Mean # per tow			CPUE (units)			Mean weight at age 7 (kg)
YEAR	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	32.10	12.72	51.48							
1971	27.01	12.29	41.73							
1972	28.43	17.69	39.17							
1973	29.29	13.69	44.89							
1974	42.51	21.81	63.21							
1975	48.17	11.07	85.27							
1976	34.24	19.38	49.10							
1977	79.06	13.74	144.38							
1978	19.88	8.26	31.50							
1979	29.94	17.80	42.08							
1980	20.09	12.27	27.91							
1981	29.86	20.96	38.76							
1982	40.24	12.96	67.52							
1983	18.05	12.77	23.33							
1984	21.85	12.85	30.85							
1985	22.79	16.31	29.27							
1986	18.47	11.43	25.51	15.95	8.71	23.19				
1987	24.88	7.28	42.48	25.70	10.60	40.80				
1988	18.21	14.37	22.05	34.87	15.17	54.57				
1989	22.22	16.08	28.36	12.58	7.24	17.92				
1990	33.42	19.24	47.60	10.76	6.00	15.52				
1991	39.28	15.86	62.70	10.31	-2.29	22.91				
1992	31.31	17.97	44.65	2.72	1.16	4.28				
1993	18.07	11.29	24.85	18.49	0.51	36.47				
1994				10.16	5.30	15.02				
1995										
1996										
1997										
1998										
1999										
2000										
Min.	18.1			2.7						
1st Q	21.4			10.3						
Med.	28.9			12.6						
3rd Q	33.6			18.5						
Max.	79.1			34.9						

Yellowtail flounder in 4X
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			1	13	14							
1961			0	9	9							
1962			4	20	24							
1963			25	59	84							
1964			57	93	150							
1965			83	141	224							
1966			58	108	166							
1967			196	29	225							
1968			173	32	205							
1969			180	21	201							
1970			212	114	326							
1971			208	10	218							
1972			154	10	164							
1973			121	18	139							
1974			215	21	236							
1975			174	39	213							
1976			218	12	230							
1977			289	13	302							
1978			384	3	387							
1979			289	2	291							
1980			251	4	255							
1981			225	2	227							
1982			211	1	212							
1983			320	1	321							
1984			165	7	172							
1985			73	0	73							
1986			111	0	111							
1987			109	0	109							
1988			79	0	79							
1989			50	0	50							
1990			78	1	79							
1991			144	0	144							
1992			118	0	118							
1993			53	0	53							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									

Minimum	9
1st quart.	90
MEDIAN	169
3rd quart.	227
Maximum	387

Yellowtail flounder in 4X

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Summer RV Mean # per tow			Survey 2 (units)			CPUE (units)			
	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	0.40	-1.06	1.86							
1971	0.56	-0.56	1.68							
1972	1.64	1.50	1.78							
1973	0.26	-0.30	0.82							
1974	0.35	0.01	0.69							
1975	0.43	-0.65	1.51							
1976	1.54	0.84	2.24							
1977	0.45	-2.77	3.67							
1978	0.44	-1.06	1.94							
1979	2.05	1.63	2.47							
1980	1.74	-0.42	3.90							
1981	1.48	1.08	1.88							
1982	1.61	1.03	2.19							
1983	0.15	-1.75	2.05							
1984	0.93	0.79	1.07							
1985	0.27	-0.09	0.63							
1986	1.32	1.10	1.54							
1987	0.67	-1.97	3.31							
1988	2.77	2.59	2.95							
1989	1.28	0.90	1.66							
1990	0.66	-0.72	2.04							
1991	2.16	-0.04	4.36							
1992	1.77	0.33	3.21							
1993	1.85	0.59	3.11							
1994										
1995										
1996										
1997										
1998										
1999										
2000										

Min.	0.2
1st Q	0.4
Med.	1.1
3rd Q	1.7
Max.	2.8

YELLOWTAIL FLOUNDER
May 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
	Canadian			Foreign	TOTAL		F 7 to 9	Expl. rate 7 to 9 (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass	
	Fixed	Mobile	Total								Total 3+ (000 t)	pawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			919	14	933							
1961			3 008	9	3 017							
1962			3 550	20	3 570							
1963			3 922	568	4 490							
1964			5 414	132	5 546							
1965			8 453	781	9 234							
1966			7 955	3 922	11 877							
1967			7 274	6 800	14 074							
1968			9 557	16 911	26 468							
1969			13 057	6 477	19 534							
1970			23 761	6 347	30 108							
1971			25 239	13 878	39 117							
1972			27 946	12 798	40 744							
1973			28 916	5 412	34 328	50 000						
1974			17 646	7 606	25 252	40 000						
1975			19 541	4 923	24 464	35 000						
1976			8 520	441	8 961	9 000						
1977			12 719	362	13 081	12 000						
1978			16 701	393	17 094	15 000						
1979			20 204	237	20 441	18 000						
1980			14 497	371	14 868	18 000						
1981			17 003	566	17 569	21 000						
1982			14 099	1 843	15 942	23 000						
1983			11 507	1 389	12 896	19 000						
1984			14 886	4 311	19 197	17 000						
1985			14 454	15 529	29 983	15 000						
1986			14 973	16 008	30 981	15 000						
1987			14 570	2 894	17 464	15 000						
1988			11 674	5 552	17 226	15 000						
1989			6 518	5 198	11 716	5 000						
1990			7 977	9 022	16 999	5 000						
1991			8 114	9 617	17 731	7 000						
1992			8 300	3 948	12 248	7 000						
1993			8 398	6 868	15 266	7 000						
1994						7 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			919	9	933	5 000						
1st quart.			8 011	472	11 970	7 500						
MEDIAN			12 197	4 130	17 047	15 000						
3rd quart.			16 269	6 851	23 458	18 750						
Maximum			28 916	16 911	40 744	50 000						

Greenland Halibut in SA 0B+1B-F
June 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rale	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0	1 585	1 585							
1961			0	1 402	1 402							
1962			0	0	0							
1963			0	2 923	2 923							
1964			0	2 868	2 868							
1965			0	3 069	3 069							
1966			0	2 696	2 696							
1967			0	2 327	2 327							
1968			0	3 323	3 323							
1969			0	2 510	2 510							
1970			0	1 884	1 884							
1971			0	4 336	4 336							
1972			0	13 897	13 897							
1973			0	9 558	9 558							
1974			0	13 368	13 368							
1975			0	24 948	24 948							
1976			0	15 788	15 788	20 000						
1977			0	12 649	12 649	20 000						
1978			0	11 853	11 853	20 000						
1979			0	19 188	19 188	25 000						
1980			136	8 136	8 272	25 000						
1981			0	9 561	9 561	25 000						
1982			0	3 814	3 814	25 000						
1983			0	4 551	4 551	25 000						
1984			0	522	522	25 000						
1985			0	1 044	1 044	25 000						
1986			0	272	272	25 000						
1987			0	1 295	1 295	25 000						
1988			2	2 603	2 605	25 000						
1989			0	2 207	2 207	25 000						
1990			6 194	9 361	15 555	25 000						
1991			5 931	5 509	11 440	25 000						
1992			8 185	6 271	14 456	25 000						
1993			7 613	4 289	11 902	25 000						
1994			0			25 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									

SA0+1

	TOTAL
Minimum	0
1st quart.	2 237
MEDIAN	3 569
3rd quart.	11 840
Maximum	24 948

Greenland Halibut in SA 0B+1B-F
June 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0	1 585	1 585							
1961			0	1 402	1 402							
1962			0	0	0							
1963			0	2 923	2 923							
1964			0	2 868	2 868							
1965			0	3 069	3 069							
1966			0	2 696	2 696							
1967			0	2 327	2 327							
1968			0	3 323	3 323							
1969			0	2 510	2 510							
1970			0	1 884	1 884							
1971			0	4 336	4 336							
1972			0	13 897	13 897							
1973			0	9 558	9 558							
1974			0	13 368	13 368							
1975			0	24 948	24 948							
1976			0	15 788	15 788	20 000						
1977			0	12 649	12 649	20 000						
1978			0	11 653	11 653	20 000						
1979			0	19 188	19 188	25 000						
1980			136	8 136	8 272	25 000						
1981			0	9 561	9 561	25 000						
1982			0	3 814	3 814	25 000						
1983			0	4 551	4 551	25 000						
1984			0	522	522	25 000						
1985			0	1 044	1 044	25 000						
1986			0	272	272	25 000						
1987			0	1 295	1 295	25 000						
1988			2	2 603	2 605	25 000						
1989			0	2 207	2 207	25 000						
1990			6 194	9 361	15 555	25 000						
1991			5 931	5 509	11 440	25 000						
1992			8 185	6 271	14 456	25 000						
1993			7 613	4 289	11 902	25 000						
1994			0			25 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					0							
1st quart.					2 237							
MEDIAN					3 569							
3rd quart.					11 840							
Maximum					24 948							

▲ SA0+1

Greenland Halibut in SA 0B+1B-F

	Abundance indices								
	Biomass - Japan_Greeland RV		RV biomass SA0B only			CPUE (t/hr)-1CD: JPN (1 vsl)			Mean weight at age 7 (kg)
YEAR	0B+ 1ABCD All ages	1BCD	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948									
1949									
1950									
1951									
1952									
1953									
1954									
1955									
1956									
1957									
1958									
1959									
1960									
1961									
1962									
1963									
1964									
1965									
1966									
1967									
1968									
1969									
1970									
1971									
1972									
1973									
1974									
1975									
1976									
1977									
1978									
1979									
1980									
1981									
1982									
1983									
1984									
1985									
1986									
1987	81 000	54 000	37 000			1.339			
1988	118 000	53 000	55 000			1.238			
1989	142 000	63 000	79 000			1.259			
1990	128 000	53 000	72 000			1.111			
1991	125 000	77 000	46 000			0.933			
1992	102 000	62 000	38 000			1.229			
1993	-	38 000	-			-			
1994									
1995									
1996									
1997									
1998									
1999									
2000									
Min.	81 000	38 000	37 000			0.93			
1st	106 000	53 000	40 000			1.14			
Med.	121 500	54 000	50 500			1.23			
3rd Q	127 250	62 500	67 750			1.25			
Max.	142 000	77 000	79 000			1.34			

Greenland Halibut in 2-3KLM
June 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			961	0	961							
1961			741	0	741							
1962			586	2	588							
1963			776	826	1 602							
1964			1 757	2 171	3 928							
1965			8 082	1 419	9 501							
1966			16 209	3 035	19 244							
1967			16 604	9 040	25 644							
1968			13 322	18 664	31 986							
1969			11 553	24 967	36 520							
1970			10 706	25 696	36 402							
1971			9 408	15 246	24 654							
1972			8 952	20 870	29 822							
1973			6 840	22 104	28 944							
1974			5 745	21 378	27 123	40 000						
1975			7 807	20 874	28 681	40 000						
1976			9 306	15 293	24 599	30 000						
1977			17 967	13 974	31 941	30 000						
1978			24 692	13 840	38 532	30 000						
1979			29 940	4 128	34 068	30 000						
1980			31 774	868	32 642	35 000						
1981			24 125	6 557	30 682	55 000						
1982			19 248	6 966	26 214	55 000						
1983			17 113	10 726	27 839	55 000						
1984			17 283	9 414	26 697	55 000						
1985			12 277	8 034	20 311	75 000						
1986			8 213	9 760	17 973	100 000						
1987			13 450	18 991	32 441	100 000						
1988			8 451	9 959	18 410	100 000						
1989			11 919	6 991	18 910	100 000						
1990			9 048	38 398	47 446	50 000						
1991			6 451	58 539	64 990	50 000						
1992			6 936	56 225	63 161	50 000						
1993			4 684	57 550	62 234	50 000						
1994						25 000						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					588							
1st quart.					18 994							
MEDIAN					27 481							
3rd quart.					32 592							
Maximum					64 990							

Greenland Halibut in 2-3KLM

YEAR	Abundance indices									Mean weight at age 7 (kg)
	CAN RV numbers (x 1000)			CAN RV numbers (x 1000)			CPUE (t/hour)			
	Estimate 1+	Lower limit	Upper limit	Estimate 7+	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975							0.497			
1976							0.461			
1977							0.576			
1978	305 607			63 970			0.725			
1979	194 679			40 015			0.596			0.96
1980	181 902			53 853			0.733			0.87
1981	205 605			50 524			0.605			0.79
1982	215 407			91 981			0.772			0.89
1983	223 114			90 780			0.735			0.86
1984	249 703			72 463			0.688			0.83
1985	214 031			49 575			0.572			0.94
1986	292 758			65 787			0.429			0.81
1987	230 089			67 127			0.548			0.84
1988	237 673			43 922			0.394			0.80
1989	299 672			46 242			0.479			0.77
1990	241 356			39 328			0.490			0.75
1991	139 497			12 067			0.274			0.81
1992	127 468			9 524			0.294			0.80
1993	248 031			3 188			0.249			0.81
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	127 468			3 188			0.25			0.75
1st Q	202 874			39 843			0.45			0.80
Med.	226 602			50 050			0.55			0.81
3rd Q	248 449			66 122			0.65			0.87
Max.	305 607			91 981			0.77			0.96

Greenland Halibut in 4RST

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	SSB (ages) (000 t)
1948												
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0									
1961			0									
1962			0									
1963			0									
1964			0									
1965			24		24							
1966			365		365							
1967			365		365							
1968			689		689							
1969			802		802							
1970			1 132		1 132							
1971			954		954							
1972			670	13	683							
1973			763		763							
1974			1 011		1 011							
1975			1 534	10	1 544							
1976			1 994	25	2 019							
1977			3 962		3 962							
1978			6 247		6 247							
1979			8 779	12	8 791							
1980			7 006		7 006							
1981			3 176		3 176							
1982			2 269		2 269	7 500						
1983			1 104		1 104	5 000						
1984			2 126		2 126	5 000						
1985			2 332		2 332	5 000						
1986			6 469		6 469	5 000						
1987			11 069		11 069	8 900						
1988			8 027		8 027	10 500						
1989			4 958	1	4 959	10 500						
1990			2 441	4	2 445	10 500						
1991			2 293		2 293	10 500						
1992			3 423		3 423	10 500						
1993			2 766		2 766	4 000						
1994			0			4 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					24							
1st quart.					954							
MEDIAN					2 269							
3rd quart.					3 962							
Maximum					11 069							

Greenland Halibut in 4RST

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Gadus (t)			A. Needler (t)			CPUE (kg/h) - from May 93			
	Estimate All ages	Lower limit 95 % CI	Upper limit	Estimate All ages	Lower limit 95 % CI	Upper limit	Estimate All ages	Lower limit -2SE	Upper limit +2SE	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976							14.277	6.057	22.497	
1977							13.085	5.523	20.647	
1978	25 142	0	50 000				14.658	6.680	22.636	
1979	13 707	0	50 000				8.494	3.906	13.082	
1980	13 508	4 866	22 150				6.783	3.077	10.489	
1981	5 859	0	22 697				5.698	2.630	8.766	
1982		0	0				4.880	2.138	7.622	
1983	7 140	0	15 682		Hammond		5.551	2.301	8.801	
1984	5 226	3 258	7 195	20 474	5 921	35 027	6.769	3.075	10.463	
1985	5 646	1 264	10 028	26 480	20 157	32 804	10.078	4.640	15.516	
1986	6 859	4 361	9 357	44 926	31 757	58 096	13.148	6.194	20.102	
1987	7 287	5 105	9 469	42 977	6 007	79 947	22.714	9.928	35.500	
1988	7 400	5 384	9 417	26 688	21 004	32 371	15.983	7.693	24.273	
1989	3 212	1 793	4 631	13 169	9 767	16 570	11.631	5.495	17.767	
1990	3 145	597	5 692	12 487	10 293	14 680	9.916	4.682	15.150	
1991	3 188	0	7 815	21 145	15 293	27 248	7.448	3.308	11.588	
1992	2 030	0	4 192	21 979	17 759	26 200	8.419	3.969	12.869	
1993	4 549	3 381	5 717	9 931	6 949	12 913	Not updated in 1994			
1994	2 783	0	9 473							
1995										
1996										
1997										
1998										
1999										
2000										
Min.	2 030			9 931			4.9			
1st Q	3 206			14 995			6.8			
Med.	5 752			21 562			9.9			
3rd Q	7 315			26 636			13.1			
Max.	25 142			44 926			22.7			

Greenland Halibut in 4RST

YEAR	Abundance indices: Gadus (t): Estimate All ages	Gadus (t): Lower limit 95 % CI	Gadus (t): Upper limit	A. Needler (t): Estimate All ages	A. Needler (t): Lower limit 95 % CI	A. Needler (t): Upper limit	CPUE (kg/h) - from May 93: Estimate All ages	CPUE: Lower limit -2SE	CPUE: Upper limit +2SE	Mean weight at age 7 (kg)
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976							14.277	6.057	22.497	
1977							13.085	5.523	20.647	
1978	25 142	0	50 000				14.658	6.680	22.636	
1979	13 707	0	50 000				8.494	3.906	13.082	
1980	13 508	4 866	22 150				6.783	3.077	10.489	
1981	5 859	0	22 697				5.698	2.630	8.766	
1982		0	0				4.880	2.138	7.622	
1983	7 140	0	15 682		Hammond		5.551	2.301	8.801	
1984	5 226	3 258	7 195	20 474	5 921	35 027	6.769	3.075	10.463	
1985	5 646	1 264	10 028	26 480	20 157	32 804	10.078	4.640	15.516	
1986	6 859	4 361	9 357	44 926	31 757	58 096	13.148	6.194	20.102	
1987	7 287	5 105	9 469	42 977	6 007	79 947	22.714	9.928	35.500	
1988	7 400	5 384	9 417	26 688	21 004	32 371	15.983	7.693	24.273	
1989	3 212	1 793	4 631	13 169	9 767	16 570	11.631	5.495	17.767	
1990	3 145	597	5 692	12 487	10 293	14 680	9.916	4.682	15.150	
1991	3 188	0	7 815	21 145	15 293	27 248	7.448	3.308	11.588	
1992	2 030	0	4 192	21 979	17 759	26 200	8.419	3.969	12.869	
1993	4 549	3 381	5 717	9 931	6 949	12 913	Not updated in 1994			
1994	2 783	0	9 473							
1995										
1996										
1997										
1998										
1999										
2000										
Min.	2 030			9 931			4.9			
1st Q	3 206			14 995			6.8			
Med.	5 752			21 562			9.9			
3rd Q	7 315			26 636			13.1			
Max.	25 142			44 926			22.7			

GREENLAND HALIBUT (TURBOT)

June 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7 to 9	7 to 9 (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	pawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			961	1 585	2 546							
1961			741	1 402	2 143							
1962			586	2	588							
1963			776	3 749	4 525							
1964			1 757	5 039	6 796							
1965			8 106	4 488	12 594							
1966			16 574	5 731	22 305							
1967			16 969	11 367	28 336							
1968			14 011	21 987	35 998							
1969			12 355	27 477	39 832							
1970			11 838	27 580	39 418							
1971			10 362	19 582	29 944							
1972			9 622	34 780	44 402							
1973			7 603	31 662	39 265							
1974			6 756	34 746	41 502	40 000						
1975			9 341	45 832	55 173	40 000						
1976			11 300	31 106	42 406	50 000						
1977			21 929	26 623	48 552	50 000						
1978			30 939	25 493	56 432	50 000						
1979			38 719	23 328	62 047	55 000						
1980			38 916	9 004	47 920	60 000						
1981			27 301	16 118	43 419	80 000						
1982			21 517	10 780	32 297	87 500						
1983			18 217	15 277	33 494	85 000						
1984			19 409	9 936	29 345	85 000						
1985			14 609	9 078	23 687	105 000						
1986			14 682	10 032	24 714	130 000						
1987			24 519	20 286	44 805	133 900						
1988			16 480	12 562	29 042	135 500						
1989			16 877	9 199	26 076	135 500						
1990			17 683	47 763	65 446	85 500						
1991			14 675	64 048	78 723	85 500						
1992			18 544	62 496	81 040	85 500						
1993			15 063	61 839	76 902	79 000						
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			586	2	588	40 000						
1st quart.			9 411	9 108	25 055	53 750						
MEDIAN			14 679	17 850	37 632	85 000						
3rd quart.			18 462	30 225	47 141	91 875						
Maximum			38 916	64 048	81 040	135 500						

Winter flounder in 4T
May 94

							Assessment Results: ADAPT					
YEAR	Catches (t)					TAC (t)	F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Canadian			Foreign	TOTAL						Total (ages) (000 t)	pawning (ages) (000 t)
	Fixed	Mobile	Total									
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960	33	867	900		900							
1961	101	1 495	1 596		1 596							
1962	263	2 049	2 312		2 312							
1963	127	3 021	3 148		3 148							
1964	209	2 793	3 002		3 002							
1965	169	4 243	4 412		4 412							
1966	116	2 940	3 056		3 056							
1967	110	2 334	2 444		2 444							
1968	19	531	550		550							
1969	380	1 314	1 694		1 694							
1970	299	2 385	2 684		2 684							
1971	480	2 341	2 821		2 821							
1972	96	1 726	1 822		1 822							
1973	104	2 196	2 300		2 300							
1974	203	1 717	1 920		1 920							
1975	179	1 831	2 010		2 010							
1976	169	2 238	2 407		2 407							
1977	284	951	1 235		1 235							
1978	273	848	1 121		1 121							
1979	253	1 332	1 585		1 585							
1980	632	1 344	1 976		1 976							
1981	306	1 635	1 941		1 941							
1982	621	1 684	2 305		2 305							
1983	255	1 544	1 799		1 799							
1984	74	75	149		149							
1985	189	991	1 180		1 180							
1986	634	1 410	2 044		2 044							
1987	680	1 131	1 811		1 811							
1988	351	1 063	1 414		1 414							
1989	506	1 583	2 089		2 089							
1990	632	1 445	2 077		2 077							
1991	484	2 052	2 536		2 536							
1992	434	1 459	1 893		1 893							
1993	447	790	1 237		1 237							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					149							
1st quart.					1 588							
MEDIAN					1 959							
3rd quart.					2 383							
Maximum					4 412							

Winter flounder in 4T

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV (#/tow) - Fall			Magdalen Is. (St:28+35)			Miramichi (St:20+21)			
	Estimate 1+	Lower limit	Upper limit	Estimate 1+	Lower limit	Upper limit	Estimate 1+	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970										
1971	8.5	0.71	16.37	17.5			124.3			
1972	11.0	5.51	16.39	19.0			157.5			
1973	9.2	6.97	11.43	28.3			36.4			
1974	33.3	16.21	50.33	132.1			25.4			
1975	14.6	10.04	19.14	27.2			18.4			
1976	64.6	-9.33	138.57	66.4			273.9			
1977	10.1	2.57	17.71	30.2			114.9			
1978	25.6	7.53	43.75	13.7			81.0			
1979	15.9	8.22	23.52	49.8			136.3			
1980	22.9	10.00	35.70	62.4			137.7			
1981	25.0	11.89	38.19	63.0			102.0			
1982	17.1	10.13	24.15	40.1			152.4			
1983	29.6	11.34	47.82	44.3			329.5			
1984	9.3	0.71	17.87	74.6			81.9			
1985	15.3	-0.62	31.28	33.2			100.6			
1986	44.7	26.26	63.20	115.5			360.6			
1987	19.8	9.12	30.46	20.8			205.3			
1988	30.6	7.65	53.47	21.9			302.9			
1989	43.8	20.67	66.85	6.2			473.0			
1990	52.4	24.18	80.58	0.0			693.0			
1991	33.8	4.36	63.16	7.2			533.2			
1992	44.2	16.89	71.51	8.4			619.2			
1993	24.1	9.18	39.08	5.0			252.4			
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	8.5			0.0			18.4			
1st Q	15.0			15.6			101.3			
Med.	24.1			28.3			152.4			
3rd Q	33.5			56.1			316.2			
Max.	64.6			132.1			693.0			

Winter flounder in 4VW

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			18	0	18							
1961			138	0	138							
1962			127	0	127							
1963			82	0	82							
1964			31	0	31							
1965			134	77	211							
1966			60	29	89							
1967			42	0	42							
1968			13	25	38							
1969			4	12	16							
1970			10	42	52							
1971			12	1 589	1 601							
1972			32	597	629							
1973			271	864	1 135							
1974			570	1 212	1 782							
1975			187	517	704							
1976			212	368	580							
1977			235	0	235							
1978			323	0	323							
1979			241	0	241							
1980			40	0	40							
1981			37	0	37							
1982			92	0	92							
1983			80	0	80							
1984			7	0	7							
1985			29	0	29							
1986			6	0	6							
1987			12	0	12							
1988			112	0	112							
1989			187	0	187							
1990			78	1	79							
1991			43	0	43							
1992			5	0	5							
1993			2	0	2							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					2							
1st quart.					33							
MEDIAN					81							
3rd quart.					229							
Maximum					1 782							

Winter flounder in 4VW

YEAR	Abundance indices									Mean weight at age 7 (kg)
	Summer RV Mean # per tow			Spring RV Mean # per tow			CPUE OTB TC 1-3			
	Estimate for 4W All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate 4VW All ages	Lower limit	Upper limit	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	0.54									
1971	1.30									
1972	3.18									
1973	1.42									
1974	0.98									
1975	1.15									
1976	0.34									
1977	0.68									
1978	0.20									
1979	0.18									
1980	0.55									
1981	0.29									
1982	0.85									
1983	0.20									
1984	2.33									
1985	2.31									
1986	1.63									
1987	2.00									
1988	1.67									
1989	2.13						0.443			
1990	4.69						0.899			
1991	7.59						0.136			
1992	1.74						0.130			
1993	3.85						0.199			
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	0.2						0.13			
1st Q	0.5						0.14			
Med.	1.4						0.20			
3rd Q	2.2						0.44			
Max.	7.6						0.90			

Winter flounder in 4X
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			53	7	60							
1961			696	3	699							
1962			443	6	449							
1963			586	28	614							
1964			1 251	29	1 280							
1965			1 103	25	1 128							
1966			937	320	1 257							
1967			884	18	902							
1968			1 115	28	1 143							
1969			1 388	12	1 400							
1970			1 470	8	1 478							
1971			1 418	65	1 483							
1972			792	33	825							
1973			633	141	774							
1974			751	223	974							
1975			615	55	670							
1976			696	21	717							
1977			1 009	13	1 022							
1978			879	5	884							
1979			844	3	847							
1980			1 133	1	1 134							
1981			1 411	0	1 411							
1982			1 139	5	1 144							
1983			912	3	915							
1984			870	7	877							
1985			794	1	795							
1986			1 031	3	1 034							
1987			1 024	20	1 044							
1988			1 459	1	1 460							
1989			1 289	0	1 289							
1990			1 885	1	1 886							
1991			602	1	603							
1992			564	0	564							
1993			343	0	343							
1994			0									
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					60							
1st quart.					731							
MEDIAN					945							
3rd quart.					1 229							
Maximum					1 886							

Winter flounder in 4X

	Abundance indices									
	Summer RV Mean # per tow			Spring RV Mean # per tow			CPUE OTB TC 1-3			
YEAR	Estimate All ages	Lower limit	Upper limit	Estimate All ages	Lower limit	Upper limit	Estimate 4X (ages)	Lower limit	Upper limit	Mean weight at age 7 (kg)
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	0.31									
1971	0.29									
1972	0.24									
1973	0.54									
1974	1.04									
1975	0.60									
1976	0.68									
1977	1.34									
1978	0.32									
1979	3.91									
1980	2.06									
1981	3.35									
1982	4.32									
1983	2.69									
1984	4.01									
1985	1.88									
1986	3.42									
1987	5.60									
1988	7.08									
1989	6.57						0.088			
1990	8.98						0.120			
1991	6.07						0.101			
1992	10.29						0.077			
1993	5.44						0.066			
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	0.2						0.07			
1st Q	0.7						0.08			
Med.	3.0						0.09			
3rd Q	5.5						0.10			
Max.	10.3						0.12			

WINTER FLOUNDER

June 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90; annual thereafter					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				7 to 9	7 to 9 (%)	Age 3 (million)	3+ (million)	Total 3+ (000 t)	pawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			971	7	978							
1961			2 430	3	2 433							
1962			2 882	6	2 888							
1963			3 816	28	3 844							
1964			4 284	29	4 313							
1965			5 649	102	5 751							
1966			4 053	349	4 402							
1967			3 370	18	3 388							
1968			1 678	53	1 731							
1969			3 086	24	3 110							
1970			4 164	50	4 214							
1971			4 251	1 654	5 905							
1972			2 646	630	3 276							
1973			3 204	1 005	4 209							
1974			3 241	1 435	4 676							
1975			2 812	572	3 384							
1976			3 315	389	3 704							
1977			2 479	13	2 492							
1978			2 323	5	2 328							
1979			2 670	3	2 673							
1980			3 149	1	3 150							
1981			3 389	0	3 389							
1982			3 536	5	3 541							
1983			2 791	3	2 794							
1984			1 026	7	1 033							
1985			2 003	1	2 004							
1986			3 081	3	3 084							
1987			2 847	20	2 867							
1988			2 985	1	2 986							
1989			3 565	0	3 565							
1990			4 040	2	4 042							
1991			3 181	1	3 182							
1992			2 462	0	2 462							
1993			1 582	0	1 582							
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			971	0	978							
1st quart.			2 521	2	2 537							
MEDIAN			3 084	7	3 166							
3rd quart.			3 499	52	3 809							
Maximum			5 649	1 654	5 905							

Atlantic Halibut in 4RST
May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F	Expl. rate	Recruits	Stock Size	Biomass	
	Fixed	Mobile	Total				(ages)	(ages) (%)	Age x (million)	(ages) (million)	Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			691	13	704							
1961			774	6	780							
1962			620	1	621							
1963			536	1	537							
1964			0									
1965			690	3	693							
1966			605	7	612							
1967			433	27	460							
1968			432	12	444							
1969			484	26	510							
1970			489	20	509							
1971			439	15	454							
1972			308	2	310							
1973			383	2	385							
1974			414	4	418							
1975			266	6	272							
1976			185	11	196							
1977			142	8	150							
1978			135		135							
1979			132		132							
1980			202		202							
1981			94	1	95							
1982			90	1	91							
1983			170	4	174							
1984			176		176							
1985			151		151							
1986			313	1	314							
1987			261		261							
1988			238		238	300						
1989			285	6	291	300						
1990			448		448	300						
1991			339		339	300						
1992			162		162	300						
1993			145		145	300						
1994			0			300						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									

Minimum	91
1st quart.	174
MEDIAN	310
3rd quart.	460
Maximum	780

Atlantic Halibut in 3NOPs4VWX

May 94

YEAR	Catches (t)					TAC (t)	Assessment Results: ADAPT					
	Canadian			Foreign	TOTAL		F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Biomass	
	Fixed	Mobile	Total								Total (ages) (000 t)	pawning (ages) (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			3 229	1 051	4 280							
1961			2 728	546	3 274							
1962			2 854	379	3 233							
1963			2 127	302	2 429							
1964			1 834	673	2 507							
1965			1 741	449	2 190							
1966			1 348	358	1 706							
1967			1 604	580	2 184							
1968			1 590	327	1 917							
1969			1 437	313	1 750							
1970	832	650	1 482	37	1 519							
1971	948	479	1 427	159	1 586							
1972	831	396	1 227	114	1 341							
1973	861	356	1 217	51	1 268							
1974	695	291	986	149	1 135							
1975	660	310	970	99	1 069							
1976	651	326	977	82	1 059							
1977	580	692	1 272	44	1 316							
1978	762	657	1 419	18	1 437							
1979	923	721	1 644	3	1 647							
1980	1 092	617	1 709	44	1 753							
1981	1 120	496	1 616	23	1 639							
1982	1 445	743	2 188	59	2 247							
1983	1 646	429	2 075	203	2 278							
1984	2 394	431	2 825	222	3 047							
1985	2 616	915	3 531	500	4 031							
1986	2 345	755	3 100	245	3 345							
1987	1 766	308	2 074	499	2 573							
1988	1 865	163	2 028	280	2 308	3 200						
1989	1 676	149	1 825	117	1 942	3 200						
1990	1 499	277	1 776	325	2 101	3 200						
1991			1 419	749	2 168	3 200						
1992			1 269	104	1 373	3 200						
1993			1 189	54	1 243	3 200						
1994						1 500						
1995												
1996												
1997												
1998												
1999												
2000												
Minimum					1 059							
1st quart.					1 458							
MEDIAN					1 930							
3rd quart.					2 399							
Maximum					4 280							

Atlantic Halibut in 3NOPs4VWX

YEAR	Abundance indices									Mean weight at age 7 (kg)
	RV - 4VWX summer (#/tow)			Survey 2 (units)			LL CPUE (t/1000 hooks)			
	Estimate All ages	Lower limit	Upper limit	Estimate (ages)	Lower limit	Upper limit	Stock Area	3NOPs	4VWX	
1948										
1949										
1950										
1951										
1952										
1953										
1954										
1955										
1956										
1957										
1958										
1959										
1960										
1961										
1962										
1963										
1964										
1965										
1966										
1967										
1968										
1969										
1970	0.12	0.04	0.20						0.055	
1971	0.13	0.01	0.25						0.064	
1972	0.10	0.06	0.14						0.064	
1973	0.15	0.07	0.23						0.058	
1974	0.21	0.09	0.33						0.054	
1975	0.22	0.12	0.32						0.053	
1976	0.38	0.20	0.56						0.060	
1977	0.41	0.19	0.63						0.056	
1978	0.25	0.15	0.35						0.060	
1979	0.33	0.21	0.45						0.088	
1980	0.39	0.23	0.55						0.092	
1981	0.31	0.15	0.47						0.078	
1982	0.23	0.11	0.35						0.075	
1983	0.07	0.03	0.11						0.077	
1984	0.20	0.10	0.30						0.067	
1985	0.13	0.07	0.19				0.074	0.069	0.077	
1986	0.20	0.08	0.32				0.076	0.123	0.061	
1987	0.19	0.11	0.27				0.083	0.141	0.063	
1988	0.25	0.09	0.41				0.107	0.147	0.084	
1989	0.33	0.19	0.47				0.084	0.131	0.066	
1990	0.21	0.11	0.31				0.080	0.097	0.068	
1991	0.31	0.17	0.45				0.067	0.079	0.058	
1992	0.25	0.11	0.39				0.076	0.097	0.067	
1993	0.18	0.08	0.28				0.062	0.089	0.052	
1994										
1995										
1996										
1997										
1998										
1999										
2000										
Min.	0.07						0.062	0.069	0.052	
1st Q	0.17						0.074	0.089	0.058	
Med.	0.22						0.076	0.097	0.064	
3rd Q	0.31						0.083	0.131	0.076	
Max.	0.41						0.107	0.147	0.092	

ATLANTIC HALIBUT

June 94

YEAR	Catches (t)					TAC (t)	1991 ass. for 62-90, annual thereafter					
	Canadian			Foreign	TOTAL		F 7 to 9	Expl. rate 7 to 9 (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass	
	Fixed	Mobile	Total								Total 3+ (000 t)	pawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			3 920	1 064	4 984							
1961			3 502	552	4 054							
1962			3 474	380	3 854							
1963			2 663	303	2 966							
1964			1 834	673	2 507							
1965			2 431	452	2 883							
1966			1 953	365	2 318							
1967			2 037	607	2 644							
1968			2 022	339	2 361							
1969			1 921	339	2 260							
1970			1 971	57	2 028							
1971			1 866	174	2 040							
1972			1 535	116	1 651							
1973			1 600	53	1 653							
1974			1 400	153	1 553							
1975			1 236	105	1 341							
1976			1 162	93	1 255							
1977			1 414	52	1 466							
1978			1 554	18	1 572							
1979			1 776	3	1 779							
1980			1 911	44	1 955							
1981			1 710	24	1 734							
1982			2 278	60	2 338							
1983			2 245	207	2 452							
1984			3 001	222	3 223							
1985			3 682	500	4 182							
1986			3 413	246	3 659							
1987			2 335	499	2 834							
1988			2 266	280	2 546	3 500						
1989			2 110	123	2 233	3 500						
1990			2 224	325	2 549	3 500						
1991			1 758	749	2 507	3 500						
1992			1 431	104	1 535	3 500						
1993			1 334	54	1 388	3 500						
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			1 162	3	1 255	3 500						
1st quart.			1 628	68	1 673	3 500						
MEDIAN			1 962	215	2 328	3 500						
3rd quart.			2 321	376	2 787	3 500						
Maximum			3 920	1 064	4 984	3 500						

Flatfish (unspecified) in 4VWX

June 94

YEAR	Catch (t)				TOTAL	TAC (t)	Assessment Results: ADAPT				Biomass	
	4X	4VW	Total				F (ages)	Expl. rate (ages) (%)	Recruits Age x (million)	Stock Size (ages) (million)	Total (ages) (000 t)	pawning (ages) (000 t)
1948			0									
1949			0									
1950			0									
1951			0									
1952			0									
1953			0									
1954			0									
1955			0									
1956			0									
1957			0									
1958			0									
1959			0									
1960			0									
1961	25	237	262		262							
1962	120	761	881		881							
1963			0		0							
1964		194	194		194							
1965		90	90		90							
1966		30	30		30							
1967			0		0							
1968	1	29	30		30							
1969		2	2		2							
1970	2	9	11		11							
1971	1	0	1		1							
1972	681	43	724		724							
1973	806	176	982		982	32 000						
1974	716	101	817		817	32 000						
1975	834	288	1 122		1 122	32 000						
1976	496	547	1 043		1 043	32 000						
1977	898	46	944		944	32 000						
1978	1 027	33	1 060		1 060	28 000						
1979	1 212	91	1 303		1 303	14 000						
1980	1 858	29	1 887		1 887	14 000						
1981	1 556	21	1 577		1 577	14 000						
1982	1 763	11	1 774		1 774	14 000						
1983	2 023	50	2 073		2 073	14 000						
1984	1 995	8	2 003		2 003	14 000						
1985	2 200	10	2 210		2 210	14 000						
1986	3 234	68	3 302		3 302	14 000						
1987	2 380	42	2 422		2 422	14 000						
1988	2 205	89	2 294		2 294	14 000						
1989	976	93	1 069		1 069	14 000						
1990	3 012	32	3 044		3 044	14 000						
1991	3 445	1 481	4 926		4 926	14 000						
1992	3 958	1 883	5 841		5 841	14 000						
1993	3 232	1 655	4 887		4 887	14 000						
1994			0			10 000						
1995			0									
1996			0									
1997			0									
1998			0									
1999			0									
2000			0									
Minimum					0	10 000						
1st quart.					194	14 000						
MEDIAN					1 060	14 000						
3rd quart.					2 073	24 500						
Maximum					5 841	32 000						

Catches (t) of plaice, witch, winter flounder, yellowtail flounder and unspecified flatfish in 4VWX.

June 94

	4VW						4X						Catch	Catch	TAC	TOTAL
Year	Plaice	Witch	W. fl.	Yt	Unsp.	TOTAL	Plaice	Witch	W. fl.	Yt	Unsp.	TOTAL	TOTAL	Canada	4VWX	Unsp.
1960	1 819	5839	18	914	0	8 590	957	40	60	14	0	1 071	9 661	9436		0
1961	1 384	5018	138	2908	237	9 685	198	59	699	9	25	990	10 675	10464		262
1962	1 485	5777	127	3479	761	11 629	242	61	449	24	120	896	12 525	11537		881
1963	2 059	7411	82	3888	0	13 440	250	75	614	84	0	1 023	14 463	13532		0
1964	2 570	8372	31	5249	194	16 416	512	257	1280	150	0	2 199	18 615	17814		194
1965	7 504	12522	211	5880	90	26 207	694	421	1128	224	0	2 467	28 674	19867		90
1966	13 480	14288	89	4685	30	32 572	726	224	1257	166	0	2 373	34 945	20927		30
1967	9 664	7433	42	4971	0	22 110	1106	383	902	225	0	2 616	24 726	24240		0
1968	18 319	20947	38	12923	29	52 256	946	735	1143	205	1	3 030	55 286	25115		30
1969	12 865	13301	16	3625	2	29 809	870	792	1400	201	0	3 263	33 072	19945		2
1970	7 723	5241	52	3356	9	16 381	635	807	1478	326	2	3 248	19 629	13667		11
1971	13 756	16723	1601	1557	0	33 637	545	1141	1483	218	1	3 388	37 025	16816		1
1972	10 089	10653	629	1321	43	22 735	566	698	825	164	681	2 934	25 669	15327		724
1973	12 093	13434	1135	1374	176	28 212	339	535	774	139	806	2 593	30 805	13145		982
1974	16 314	6917	1782	703	101	25 817	458	498	974	236	716	2 882	28 699	15466	32000	817
1975	11 451	8591	704	1357	288	22 391	296	331	670	213	834	2 344	24 735	12784	32000	1122
1976	10 838	5401	580	674	547	18 040	309	341	717	230	496	2 093	20 133	11537	28000	1043
1977	7 308	2010	235	1141	46	10 740	449	421	1022	302	898	3 092	13 832	13782	28000	944
1978	6 244	2103	323	1241	33	9 944	512	188	884	387	1027	2 998	12 942	13201	14300	1060
1979	5 526	1781	241	1799	91	9 438	828	290	847	291	1212	3 468	12 906	13743	14000	1303
1980	6 891	1990	40	2236	29	11 186	681	331	1134	255	1858	4 259	15 445	15559	14000	1887
1981	6 258	1279	37	2662	21	10 257	514	462	1411	227	1556	4 170	14 427	14306	14000	1577
1982	5 320	890	92	2411	11	8 724	377	583	1144	212	1763	4 079	12 803	12688	14000	1774
1983	5 523	1004	80	2102	50	8 759	584	659	915	321	2023	4 502	13 261	12916	14000	2073
1984	5 793	1340	7	2290	8	9 438	335	593	877	172	1995	3 972	13 410	13017	14000	2003
1985	4 120	1746	29	947	10	6 852	317	525	795	73	2200	3 910	10 762	10557	14000	2210
1986	3 090	2383	6	694	68	6 241	592	631	1034	111	3234	5 602	11 843	11639	14000	3302
1987	4 623	2725	12	1041	42	8 443	262	492	1044	109	2380	4 287	12 730	12617	14000	2422
1988	3 087	2406	112	989	89	6 683	366	541	1460	79	2205	4 651	11 334	11201	14000	2294
1989	3 365	1765	187	1459	93	6 869	481	527	1289	50	976	3 323	10 192	10187	14000	1069
1990	1 919	1304	79	2931	32	6 265	470	645	1886	79	3012	6 092	12 357	12194	14000	3044
1991	378	1326	43	1331	1481	4 559	988	605	603	144	3445	5 785	10 344	10 115	14000	4926
1992	578	1031	5	1373	1883	4 870	423	829	564	118	3958	5 892	10 762	10 599	14000	5841
1993	123	532	2	1648	1655	3 960	9	373	343	53	3232	4 010	7 970	7 970	14000	4887
1994	0	0	0	0	0		0	0	0	0	0				10000	0
1995	0	0	0	0	0		0	0	0	0	0					0
1996	0	0	0	0	0		0	0	0	0	0					0
1997	0	0	0	0	0		0	0	0	0	0					0
1998	0	0	0	0	0		0	0	0	0	0					0
1999	0	0	0	0	0		0	0	0	0	0					0
2000	0	0	0	0	0		0	0	0	0	0					0

FLATFISH

May 94

	Catches (t)					TAC (t)	1991 ass. for 62-90, annual thereafter					
YEAR	Canadian			Foreign	TOTAL		F 7 to 9	Expl. rate 7 to 9 (%)	Recruits Age 3 (million)	Stock Size 3+ (million)	Biomass	
	Fixed	Mobile	Total								Total 3+ (000 t)	pawning 7+ (000 t)
1948												
1949												
1950												
1951												
1952												
1953												
1954												
1955												
1956												
1957												
1958												
1959												
1960			54 719	7 342	62 053							
1961			49 309	7 306	56 615							
1962			48 417	2 013	50 430							
1963			57 780	10 573	68 353							
1964			76 129	15 462	91 591							
1965			101 438	37 297	138 735							
1966			121 338	51 906	173 244							
1967			125 205	76 949	202 154							
1968			118 677	120 835	239 512							
1969			134 058	85 807	219 865							
1970			144 580	78 835	223 415							
1971			137 615	99 656	237 271							
1972			124 691	102 487	227 178							
1973			126 325	96 857	223 182	142 500						
1974			102 951	93 005	195 956	240 000						
1975			97 902	94 104	192 006	233 000						
1976			114 407	60 064	174 471	196 000						
1977			127 028	38 014	165 042	200 100						
1978			134 484	36 515	170 999	197 500						
1979			144 586	30 663	175 249	188 000						
1980			140 575	15 247	155 822	194 000						
1981			130 795	23 792	154 587	214 000						
1982			114 789	19 509	134 298	226 000						
1983			93 678	25 951	119 629	219 500						
1984			99 502	27 046	126 548	217 500						
1985			103 690	49 510	153 200	229 500						
1986			100 827	71 688	172 515	260 500						
1987			109 857	59 667	169 524	254 400						
1988			88 753	42 430	131 183	249 500						
1989			85 713	38 132	123 845	229 800						
1990			80 764	69 727	150 491	172 400						
1991			75 579	91 286	166 865	175 300						
1992			64 511	71 774	136 285	175 300						
1993			48 933	78 958	127 891	142 500						
1994												
1995												
1996												
1997												
1998												
1999												
2000												
Minimum			48 417	2 013	50 430	142 500						
1st quart.			82 001	26 225	128 714	188 000						
MEDIAN			103 321	50 708	160 432	214 000						
3rd quart.			126 045	78 927	187 817	229 800						
Maximum			144 586	120 835	239 512	260 500						